Charles R Gallistel

List of Publications by Year
in descending order

154	12,446	38660 50	27345 106
papers	citations	h-index	g-index

166	166	166	5295
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dopamine encodes real-time reward availability and transitions between reward availability states on different timescales. Nature Communications, 2022, 13, .	5.8	9
2	Reconsidering the evidence for learning in single cells. ELife, 2021, 10, .	2.8	58
3	The physical basis of memory. Cognition, 2021, 213, 104533.	1.1	19
4	The approximate number system represents magnitude and precision. Behavioral and Brain Sciences, 2021, 44, e187.	0.4	3
5	Locating the engram: Should we look for plastic synapses or information-storing molecules?. Neurobiology of Learning and Memory, 2020, 169, 107164.	1.0	44
6	Number and time in acquisition, extinction and recovery. Journal of the Experimental Analysis of Behavior, 2020, 113, 15-36.	0.8	6
7	Getting Numbers into Brains. Nature Human Behaviour, 2020, 4, 1222-1223.	6.2	5
8	Where meanings arise and how: Building on Shannon's foundations. Mind and Language, 2020, 35, 390-401.	1.2	5
9	Evidence for a Mixed Timing and Counting Strategy in Mice Performing a Mechner Counting Task. Frontiers in Behavioral Neuroscience, 2019, 13, 109.	1.0	9
10	Contingency, contiguity, and causality in conditioning: Applying information theory and Weberâ€™s Law to the assignment of credit problem.. Psychological Review, 2019, 126, 761-773.	2.7	21
11	Time-scale-invariant information-theoretic contingencies in discrimination learning.. Journal of Experimental Psychology Animal Learning and Cognition, 2019, 45, 280-289.	0.3	9
12	Our understanding of neural codes rests on Shannon's foundations. Behavioral and Brain Sciences, 2019, 42, e226.	0.4	1
13	Introduction: The origins of numerical abilities. Philosophical Transactions of the Royal Society B: Biological Sciences, 2018, 373, 20160507.	1.8	25
14	Finding numbers in the brain. Philosophical Transactions of the Royal Society B: Biological Sciences, 2018, 373, 20170119.	1.8	23
15	Navigation: Whence Our Sense of Direction?. Current Biology, 2017, 27, R108-R110.	1.8	13
16	Accurate step-hold tracking of smoothly varying periodic and aperiodic probability. Attention, Perception, and Psychophysics, 2017, 79, 1480-1494.	0.7	6
17	Numbers and brains. Learning and Behavior, 2017, 45, 327-328.	0.5	5
18	The Coding Question. Trends in Cognitive Sciences, 2017, 21, 498-508.	4.0	57

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19	On the research of time past: the hunt for the substrate of memory. Annals of the New York Academy of Sciences, 2017, 1396, 108-125.	1.8	39
20	Theoretical implications of quantitative properties of interval timing and probability estimation in mouse and rat. Journal of the Experimental Analysis of Behavior, 2017, 108, 39-72.	0.8	22
21	Bayesian change-point analysis reveals developmental change in a classic theory of mind task. Cognitive Psychology, 2016, 91, 124-149.	0.9	11
22	The perception of probability.. Psychological Review, 2014, 121, 96-123.	2.7	69
23	Cognitive assessment of mice strains heterozygous for cell-adhesion genes reveals strain-specific alterations in timing. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20120464.	1.8	7
24	Temporal contingency. Behavioural Processes, 2014, 101, 89-96.	0.5	24
25	Time to rethink the neural mechanisms of learning and memory. Neurobiology of Learning and Memory, 2014, 108, 136-144.	1.0	91
26	Reply to Cheung et al.: The cognitive map hypothesis remains the best interpretation of the data in honeybee navigation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E4398-E4398.	3.3	32
27	Way-finding in displaced clock-shifted bees proves bees use a cognitive map. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 8949-8954.	3.3	87
28	Automated, Quantitative Cognitive/Behavioral Screening of Mice: For Genetics, Pharmacology, Animal Cognition and Undergraduate Instruction. Journal of Visualized Experiments, 2014, , e51047.	0.2	8
29	The Neuroscience of Learning: Beyond the Hebbian Synapse. Annual Review of Psychology, 2013, 64, 169-200.	9.9	172
30	It's the information!. Behavioural Processes, 2013, 95, 3-7.	0.5	38
31	Conditioned stimulus informativeness governs conditioned stimulusâ^'unconditioned stimulus associability.. Journal of Experimental Psychology, 2012, 38, 217-232.	1.9	40
32	Mice take calculated risks. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 8776-8779.	3.3	53
33	"Conditional stimulus informativeness governs conditioned stimulusâ€"Unconditioned stimulus associability": Correction to Ward et al. (2012).. Journal of Experimental Psychology, 2012, 38, 254-254.	1.9	0
34	Extinction from a rationalist perspective. Behavioural Processes, 2012, 90, 66-80.	0.5	42
35	On the evils of group averaging: Commentary on Nevin's â€œResistance to extinction and behavioral momentumâ€. Behavioural Processes, 2012, 90, 98-99.	0.5	9
36	On rationalism and optimality: Responses to the Miller and Nevin Commentaries. Behavioural Processes, 2012, 90, 87-88.	0.5	3

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37	Contingency in Learning. , 2012, , 802-806.		0
38	Prelinguistic Thought. Language Learning and Development, 2011, 7, 253-262.	0.7	26
39	Mental Magnitudes. , 2011, , 3-12.		42
40	Time and Associative Learning.. Comparative Cognition and Behavior Reviews, 2010, 5, 1-22.	2.0	127
41	Screening for Learning and Memory Mutations: A New Approach. Acta Psychologica Sinica, 2010, 42, 138-158.	0.4	8
42	Risk assessment in man and mouse. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 2459-2463.	3.3	111
43	The precision of locomotor odometry in humans. Experimental Brain Research, 2009, 193, 429-436.	0.7	43
44	Acquisition of peak responding: What is learned?. Behavioural Processes, 2009, 80, 67-75.	0.5	65
45	The importance of proving the null.. Psychological Review, 2009, 116, 439-453.	2.7	336
46	The Neural Mechanisms that Underlie Decision Making. , 2009, , 417-424.		4
47	Interval timing in genetically modified mice: a simple paradigm. Genes, Brain and Behavior, 2008, 7, 373-384.	1.1	64
48	Intact interval timing in circadian CLOCK mutants. Brain Research, 2008, 1227, 120-127.	1.1	31
49	The generative basis of natural number concepts. Trends in Cognitive Sciences, 2008, 12, 213-218.	4.0	111
50	Where Integers Come From. , 2008, , 109-138.		7
51	IS MATCHING INNATE?. Journal of the Experimental Analysis of Behavior, 2007, 87, 161-199.	0.8	66
52	Time left in the mouse. Behavioural Processes, 2007, 74, 142-151.	0.5	12
53	Commentary on Le Corre & Carey. Cognition, 2007, 105, 439-445.	1.1	27
54	Nonverbal arithmetic in humans: Light from noise. Perception & Psychophysics, 2007, 69, 1185-1203.	2.3	56

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55	Flawed foundations of associationism? Comment on Machado and Silva (2007).. American Psychologist, 2007, 62, 682-685.	3.8	32
56	Dead Reckoning, Cognitive Maps, Animal Navigation and the Representation of Space: An Introduction. , 2007, , 137-143.		1
57	Pavlovian contingencies and temporal information.. Journal of Experimental Psychology, 2006, 32, 284-294.	1.9	36
58	Dopamine and reward: Comment on Hernandez et al. (2006).. Behavioral Neuroscience, 2006, 120, 992-994.	0.6	4
59	AUTOSHAPED HEAD POKING IN THE MOUSE: A QUANTITATIVE ANALYSIS OF THE LEARNING CURVE. Journal of the Experimental Analysis of Behavior, 2006, 85, 293-308.	0.8	43
60	Cross-domain transfer of quantitative discriminations: Is it all a matter of proportion?. Psychonomic Bulletin and Review, 2006, 13, 636-642.	1.4	57
61	Shape Parameters Explain Data From Spatial Transformations: Comment on Pearce et al. (2004) and Tommasi & Polli (2004).. Journal of Experimental Psychology, 2005, 31, 254-259.	1.9	78
62	Deconstructing the law of effect. Games and Economic Behavior, 2005, 52, 410-423.	0.4	28
63	Sources of Variability and Systematic Error in Mouse Timing Behavior.. Journal of Experimental Psychology, 2004, 30, 3-16.	1.9	86
64	The learning curve: Implications of a quantitative analysis. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 13124-13131.	3.3	492
65	More direction neededRepresenting Direction in Language and Space, edited by E. van der Zee, and J. Slack, Oxford University Press, 2003. $99.00 (hbk)/ $39.95 (pabk) (282 pages) ISBN 0 19 926018 4. Trends in Cognitive Sciences, 2004, 8, 97-97.	4.0	0
66	Temporal landmarks: proximity prevails. Animal Cognition, 2003, 6, 113-120.	0.9	16
67	Conditioning from an information processing perspective. Behavioural Processes, 2003, 62, 89-101.	0.5	60
68	Language and spatial frames of reference in mind and brain. Trends in Cognitive Sciences, 2002, 6, 321-322.	4.0	43
69	Conception, perception and the control of action. Trends in Cognitive Sciences, 2002, 6, 504.	4.0	6
70	A Test of Gibbon's Feedforward Model of Matching. Learning and Motivation, 2002, 33, 46-62.	0.6	2
71	Frequency, contingency and the information processing theory of conditioning. , 2002, , 153-172.		12
72	Mental Representations, Psychology of. , 2001, , 9691-9695.		13

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73	The rat approximates an ideal detector of changes in rates of reward: Implications for the law of effect.. Journal of Experimental Psychology, 2001, 27, 354-372.	1.9	146
74	Variability signatures distinguish verbal from nonverbal counting for both large and small numbers. Psychonomic Bulletin and Review, 2001, 8, 698-707.	1.4	341
75	Numerical Subtraction in the Pigeon: Evidence for a Linear Subjective Number Scale. Psychological Science, 2001, 12, 238-243.	1.8	209
76	Response to Dehaene. Psychological Science, 2001, 12, 247-247.	1.8	5
77	Computational Versus Associative Models of Simple Conditioning. Current Directions in Psychological Science, 2001, 10, 146-150.	2.8	106
78	Behavior, Hierarchical Organization of. , 2001, , 1069-1072.		0
79	The rat approximates an ideal detector of changes in rates of reward: implications for the law of effect. Journal of Experimental Psychology, 2001, 27, 354-72.	1.9	122
80	Time, rate, and conditioning.. Psychological Review, 2000, 107, 289-344.	2.7	966
81	Non-verbal numerical cognition: from reals to integers. Trends in Cognitive Sciences, 2000, 4, 59-65.	4.0	792
82	Coordinate Transformations in the Genesis of Directed Action. , 1999, , 1-42.		9
83	CAN A DECAY PROCESS EXPLAIN THE TIMING OF CONDITIONED RESPONSES?. Journal of the Experimental Analysis of Behavior, 1999, 71, 264-271.	0.8	15
84	Nonverbal Counting in Humans: The Psychophysics of Number Representation. Psychological Science, 1999, 10, 130-137.	1.8	567
85	Self-stimulating rats combine subjective reward magnitude and subjective reward rate multiplicatively.. Journal of Experimental Psychology, 1998, 24, 265-277.	1.9	22
86	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. Journal of Neuroscience, 1998, 18, 8515-8533.	1.7	36
87	Self-stimulating rats combine subjective reward magnitude and subjective reward rate multiplicatively. Journal of Experimental Psychology, 1998, 24, 265-77.	1.9	23
88	Toward a neurobiology of temporal cognition: advances and challenges. Current Opinion in Neurobiology, 1997, 7, 170-184.	2.0	683
89	Destruction of the medial forebrain bundle caudal to the site of stimulation reduces rewarding efficacy but destruction rostrally does not.. Behavioral Neuroscience, 1996, 110, 766-790.	0.6	23
90	Computations on Metric Maps in Mammals: Getting Oriented and Choosing a Multi-Destination Route. Journal of Experimental Biology, 1996, 199, 211-217.	0.8	122

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91	Destruction of the medial forebrain bundle caudal to the site of stimulation reduces rewarding efficacy but destruction rostrally does not. Behavioral Neuroscience, 1996, 110, 766-90.	0.6	9
92	Computations on metric maps in mammals: getting oriented and choosing a multi-destination route. Journal of Experimental Biology, 1996, 199, 211-7.	0.8	85
93	Is Long-Term Potentiation a Plausible Basis for Memory?. , 1995, , 328-338.		11
94	Foraging for brain stimulation: toward a neurobiology of computation. Cognition, 1994, 50, 151-170.	1.1	66
95	Saturation of subjective reward magnitude as a function of current and pulse frequency.. Behavioral Neuroscience, 1994, 108, 151-160.	0.6	54
96	Kinetics of matching.. Journal of Experimental Psychology, 1994, 20, 79-95.	1.9	51
97	Kinetics of matching. Journal of Experimental Psychology, 1994, 20, 79-95.	1.9	27
98	Subjective reward magnitude of medial forebrain stimulation as a function of train duration and pulse frequency.. Behavioral Neuroscience, 1993, 107, 389-401.	0.6	28
99	Homeostatic Conditioning: Learning and Physiological Regulation . Barry R. Dworkin. University of Chicago Press, Chicago, 1993. xvi, 215 pp., illus. $23.95 or Â£19.25. John D. and Catherine T. MacArthur Foundation Series on Mental Health and Development.. Science, 1993, 262, 445-445.	6.0	0
100	Homeostatic Conditioning: Learning and Physiological Regulation . Barry R. Dworkin. University of Chicago Press, Chicago, 1993. xvi, 215 pp., illus. $23.95 or Â£19.25. John D. and Catherine T. MacArthur Foundation Series on Mental Health and Development.. Science, 1993, 262, 445-445.	6.0	0
101	The function relating the subjective magnitude of brain stimulation reward to stimulation strength varies with site of stimulation. Behavioural Brain Research, 1992, 52, 183-193.	1.2	25
102	Preverbal and verbal counting and computation. Cognition, 1992, 44, 43-74.	1.1	1,300
103	Classical conditioning as a nonstationary, multivariate time series analysis: A spreadsheet model. Behavior Research Methods, 1992, 24, 340-351.	1.3	7
104	Measuring the subjective magnitude of brain stimulation reward by titration with rate of reward.. Behavioral Neuroscience, 1991, 105, 913-925.	0.6	50
105	Effect of current on the maximum possible reward.. Behavioral Neuroscience, 1991, 105, 901-912.	0.6	23
106	Characteristics of spatiotemporal integration in the priming and rewarding effects of medial forebrain bundle stimulation.. Behavioral Neuroscience, 1991, 105, 884-900.	0.6	14
107	Effect of current on the maximum possible reward. Behavioral Neuroscience, 1991, 105, 901-12.	0.6	5
108	Measuring the subjective magnitude of brain stimulation reward by titration with rate of reward. Behavioral Neuroscience, 1991, 105, 913-25.	0.6	14

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109	Animal Cognition: The Representation of Space, Time and Number. Annual Review of Psychology, 1989, 40, 155-189.	9.9	305
110	Heading in the rat: Determination by environmental shape. Learning and Behavior, 1988, 16, 404-410.	3.4	172
111	Counting versus subitizing versus the sense of number. Behavioral and Brain Sciences, 1988, 11, 585-586.	0.4	14
112	Reward saturation in medial forebrain bundle self-stimulation. Physiology and Behavior, 1987, 41, 585-593.	1.0	28
113	Quantitative determination of the effects of catecholaminergic agonists and antagonists on the rewarding efficacy of brain stimulation. Pharmacology Biochemistry and Behavior, 1987, 26, 731-741.	1.3	108
114	The role of the dopaminergic projections in MFB self-stimulation. Behavioural Brain Research, 1986, 22, 97-105.	1.2	22
115	The role of the dopaminergic projections in MFB self-stimulation. Behavioural Brain Research, 1986, 20, 313-321.	1.2	21
116	Does the perception of reward magnitude of self-administered electrical brain stimulation have a circadian rhythm?. Behavioral Neuroscience, 1986, 100, 888-893.	0.6	6
117	A modular sense of place?. Behavioral and Brain Sciences, 1985, 8, 11-12.	0.4	4
118	Forebrain origins and terminations of the medial forebrain bundle metabolically activated by rewarding stimulation or by reward-blocking doses of pimozide. Journal of Neuroscience, 1985, 5, 1246-1261.	1.7	115
119	A microcomputer-based method for physiologically interpretable measurement of the rewarding efficacy of brain stimulation. Physiology and Behavior, 1985, 35, 395-403.	1.0	78
120	Pimozide and amphetamine have opposing effects on the reward summation function. Pharmacology Biochemistry and Behavior, 1984, 20, 73-77.	1.3	148
121	Temporal integration in self-stimulation: A paradox.. Behavioral Neuroscience, 1984, 98, 467-478.	0.6	7
122	Affinity for the dopamine D2 receptor predicts neuroleptic potency in blocking the reinforcing effect of MFB stimulation. Pharmacology Biochemistry and Behavior, 1983, 19, 867-872.	1.3	74
123	Unilaterally activated systems in rats self-stimulating at sites in the medial forebrain bundle, medial prefrontal cortex, or locus coeruleus. Brain Research, 1983, 266, 39-50.	1.1	67
124	SELF-STIMULATION. , 1983, , 269-349.		7
125	Does pimozide block the reinforcing effect of brain stimulation?. Pharmacology Biochemistry and Behavior, 1982, 17, 769-781.	1.3	106
126	Pimozide blocks reinforcement but not priming from MFB stimulation in the rat. Pharmacology Biochemistry and Behavior, 1982, 17, 783-787.	1.3	44

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127	Effects of reinforcement-blocking doses of pimozide on neural system driven by rewarding stimulation of the MFB: A 14C-2-deoxyglucose analysis. Pharmacology Biochemistry and Behavior, 1982, 17, 841-845.	1.3	35
128	Computer assisted analysis of 2-DG autoradiographs. Neuroscience and Biobehavioral Reviews, 1982, 6, 409-420.	2.9	91
129	PrÃ©cis of Gallistel'sThe organization of action: A new synthesis. Behavioral and Brain Sciences, 1981, 4, 609-619.	0.4	94
130	Matters of principle: Hierarchies, representations, and action. Behavioral and Brain Sciences, 1981, 4, 639-650.	0.4	2
131	Bell, Magendie, and the proposals to restrict the use of animals in neurobehavioral research.. American Psychologist, 1981, 36, 357-360.	3.8	18
132	A portrait of the substrate for self-stimulation.. Psychological Review, 1981, 88, 228-273.	2.7	340
133	Subcortical Stimulation for Motivation and Reinforcement. , 1981, , 141-171.		7
134	A portrait of the substrate for self-stimulation. Psychological Review, 1981, 88, 228-73.	2.7	60
135	From muscles to motivation. American Scientist, 1980, 68, 398-409.	0.1	11
136	What can one learn from a strength-duration experiment?. Journal of Mathematical Psychology, 1978, 18, 1-24.	1.0	54
137	Self-stimulation in the rat: Quantitative characteristics of the reward pathway.. Journal of Comparative and Physiological Psychology, 1978, 92, 977-998.	1.8	94
138	The irrelevance of past pleasure. Behavioral and Brain Sciences, 1978, 1, 59-60.	0.4	4
139	Reward versus performance in self-stimulation: Electrode-specific effects of !a-methyl-p-tyrosine on reward in the rat.. Journal of Comparative and Physiological Psychology, 1977, 91, 962-974.	1.8	88
140	[14C] 2-deoxyglucose uptake marks systems activated by rewarding brain stimulation. Brain Research Bulletin, 1977, 2, 149-152.	1.4	44
141	Runway performance of rats for brain-stimulation or food reward: Effects of hunger and priming.. Journal of Comparative and Physiological Psychology, 1975, 89, 590-599.	1.8	27
142	On the optimal pulse duration in electrical stimulation of the brain. Physiology and Behavior, 1974, 12, 749-754.	1.0	19
143	Parametric analysis of brain stimulation reward in the rat: III. Effect of performance variables on the reward summation function.. Journal of Comparative and Physiological Psychology, 1974, 87, 876-883.	1.8	192
144	Parametric analysis of brain stimulation reward in the rat: II. Temporal summation in the reward system.. Journal of Comparative and Physiological Psychology, 1974, 87, 860-869.	1.8	54

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145	Note on temporal summation in the reward system.. Journal of Comparative and Physiological Psychology, 1974, 87, 870-875.	1.8	41
146	Parametric analysis of brain stimulation reward in the rat: I. The transient process and the memory-containing process.. Journal of Comparative and Physiological Psychology, 1974, 87, 848-859.	1.8	112
147	Incidence and magnitude of the "priming effect" in self-stimulating rats.. Journal of Comparative and Physiological Psychology, 1973, 82, 286-293.	1.8	27
148	Specificity of brain stimulation reward in the rat.. Journal of Comparative and Physiological Psychology, 1971, 76, 199-205.	1.8	38
149	Neuron Function Inferred from Behavioral and Electrophysiological Estimates of Refractory Period. Science, 1969, 166, 1028-1030.	6.0	58
150	Self-stimulation: Failure of pretrial stimulation to affect rats' electrode preference.. Journal of Comparative and Physiological Psychology, 1969, 69, 722-729.	1.8	10
151	The incentive of brain-stimulation reward.. Journal of Comparative and Physiological Psychology, 1969, 69, 713-721.	1.8	70
152	Intracranial stimulation and natural reward: Differential effects of trial spacing. Learning and Behavior, 1967, 9, 167-168.	0.6	27
153	Motivating effects in self-stimulation.. Journal of Comparative and Physiological Psychology, 1966, 62, 95-101.	1.8	52
154	Electrical self-stimulation and its theoretical implications.. Psychological Bulletin, 1964, 61, 23-34.	5.5	44