Bruno B Averbeck

List of Publications by Year
in descending order

146	8,736	47006 47	54911 84
papers	citations	h-index	g-index

156	156	156	8622
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Neural correlations, population coding and computation. Nature Reviews Neuroscience, 2006, 7, 358-366.	10.2	1,419
2	Integration of Auditory and Visual Communication Information in the Primate Ventrolateral Prefrontal Cortex. Journal of Neuroscience, 2006, 26, 11138-11147.	3.6	243
3	Parallel processing of serial movements in prefrontal cortex. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 13172-13177.	7.1	241
4	Neural Representation of Vocalizations in the Primate Ventrolateral Prefrontal Cortex. Journal of Neurophysiology, 2005, 93, 734-747.	1.8	207
5	Effects of Noise Correlations on Information Encoding and Decoding. Journal of Neurophysiology, 2006, 95, 3633-3644.	1.8	196
6	Learning and production of movement sequences: Behavioral, neurophysiological, and modeling perspectives. Human Movement Science, 2004, 23, 699-746.	1.4	183
7	Dopamine modulates novelty seeking behavior during decision making.. Behavioral Neuroscience, 2014, 128, 556-566.	1.2	183
8	Coding and transmission of information by neural ensembles. Trends in Neurosciences, 2004, 27, 225-230.	8.6	174
9	The Primate Cortical Auditory System and Neural Representation of Conspecific Vocalizations. Annual Review of Neuroscience, 2009, 32, 315-346.	10.7	161
10	Neurophysiological effects of acute oxytocin administration: systematic review and meta-analysis of placebo-controlled imaging studies. Journal of Psychiatry and Neuroscience, 2015, 40, E1-E22.	2.4	159
11	Reinforcement learning in artificial and biological systems. Nature Machine Intelligence, 2019, 1, 133-143.	16.0	157
12	CSF and Blood Oxytocin Concentration Changes following Intranasal Delivery in Macaque. PLoS ONE, 2014, 9, e103677.	2.5	146
13	Motivational neural circuits underlying reinforcement learning. Nature Neuroscience, 2017, 20, 505-512.	14.8	144
14	Action Selection and Action Value in Frontal-Striatal Circuits. Neuron, 2012, 74, 947-960.	8.1	140
15	Estimates of Projection Overlap and Zones of Convergence within Frontal-Striatal Circuits. Journal of Neuroscience, 2014, 34, 9497-9505.	3.6	140
16	Activity in prefrontal cortex during dynamic selection of action sequences. Nature Neuroscience, 2006, 9, 276-282.	14.8	128
17	Reversal Learning and Dopamine: A Bayesian Perspective. Journal of Neuroscience, 2015, 35, 2407-2416.	3.6	127
18	Amygdala and Ventral Striatum Make Distinct Contributions to Reinforcement Learning. Neuron, 2016, 92, 505-517.	8.1	112

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19	Rapid Sequences of Population Activity Patterns Dynamically Encode Task-Critical Spatial Information in Parietal Cortex. Journal of Neuroscience, 2010, 30, 11640-11653.	3.6	104
20	Resonance in subthalamo-cortical circuits in Parkinson's disease. Brain, 2009, 132, 2139-2150.	7.6	103
21	Prefrontal Neural Correlates of Memory for Sequences. Journal of Neuroscience, 2007, 27, 2204-2211.	3.6	102
22	Parietal Cortex and Insula Relate to Evidence Seeking Relevant to Reward-Related Decisions. Journal of Neuroscience, 2011, 31, 17572-17582.	3.6	98
23	The Statistical Neuroanatomy of Frontal Networks in the Macaque. PLoS Computational Biology, 2008, 4, e1000050.	3.2	94
24	Neural activity in prefrontal cortex during copying geometrical shapes. Experimental Brain Research, 2003, 150, 127-141.	1.5	93
25	Neural activity in prefrontal cortex during copying geometrical shapes. Experimental Brain Research, 2003, 150, 142-153.	1.5	93
26	Neural Noise and Movement-Related Codes in the Macaque Supplementary Motor Area. Journal of Neuroscience, 2003, 23, 7630-7641.	3.6	89
27	Risk and learning in impulsive and nonimpulsive patients with Parkinson's disease. Movement Disorders, 2010, 25, 2203-2210.	3.9	88
28	Pathological Choice: The Neuroscience of Gambling and Gambling Addiction. Journal of Neuroscience, 2013, 33, 17617-17623.	3.6	87
29	Subcortical Substrates of Explore-Exploit Decisions in Primates. Neuron, 2019, 103, 533-545.e5.	8.1	87
30	Decision making, impulsivity, and addictions: Do Parkinson's disease patients jump to conclusions?. Movement Disorders, 2012, 27, 1137-1145.	3.9	85
31	Probabilistic learning and inference in schizophrenia. Schizophrenia Research, 2011, 127, 115-122.	2.0	83
32	Intranasal oxytocin effects on social cognition: A critique. Brain Research, 2014, 1580, 69-77.	2.2	82
33	Prefrontal Cortex Predicts State Switches during Reversal Learning. Neuron, 2020, 106, 1044-1054.e4.	8.1	78
34	Oxytocin Decreases Aversion to Angry Faces in an Associative Learning Task. Neuropsychopharmacology, 2010, 35, 2502-2509.	5.4	76
35	Neural Ensemble Decoding Reveals a Correlate of Viewer- to Object-Centered Spatial Transformation in Monkey Parietal Cortex. Journal of Neuroscience, 2008, 28, 5218-5228.	3.6	75
36	Understanding the parietal lobe syndrome from a neurophysiological and evolutionary perspective. European Journal of Neuroscience, 2010, 31, 2320-2340.	2.6	75

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37	Spontaneous High-Gamma Band Activity Reflects Functional Organization of Auditory Cortex in the Awake Macaque. Neuron, 2012, 74, 899-910.	8.1	69
38	The Computational and Neural Basis of Rhythmic Timing in Medial Premotor Cortex. Journal of Neuroscience, 2017, 37, 4552-4564.	3.6	69
39	Dynamic and Static Facial Expressions Decoded from Motion-Sensitive Areas in the Macaque Monkey. Journal of Neuroscience, 2012, 32, 15952-15962.	3.6	67
40	Theory of Choice in Bandit, Information Sampling and Foraging Tasks. PLoS Computational Biology, 2015, 11, e1004164.	3.2	67
41	Amygdala Contributions to Stimulusâ€“Reward Encoding in the Macaque Medial and Orbital Frontal Cortex during Learning. Journal of Neuroscience, 2017, 37, 2186-2202.	3.6	67
42	Novelty seeking behaviour in Parkinson's disease. Neuropsychologia, 2011, 49, 2483-2488.	1.6	66
43	The Role of Frontal Cortical and Medial-Temporal Lobe Brain Areas in Learning a Bayesian Prior Belief on Reversals. Journal of Neuroscience, 2015, 35, 11751-11760.	3.6	66
44	Stroop test performance in impulsive and non impulsive patients with Parkinsonâ€™s disease. Parkinsonism and Related Disorders, 2011, 17, 212-214.	2.2	65
45	Oxytocin enhances attention to the eye region in rhesus monkeys. Frontiers in Neuroscience, 2014, 8, 41.	2.8	64
46	Information-Limiting Correlations in Large Neural Populations. Journal of Neuroscience, 2020, 40, 1668-1678.	3.6	62
47	Computational Architecture of the Parieto-Frontal Network Underlying Cognitive-Motor Control in Monkeys. ENeuro, 2017, 4, ENEURO.0306-16.2017.	1.9	62
48	Amygdala lesions in rhesus macaques decrease attention to threat. Nature Communications, 2015, 6, 10161.	12.8	60
49	Probabilistic Encoding of Vocalizations in Macaque Ventral Lateral Prefrontal Cortex. Journal of Neuroscience, 2006, 26, 11023-11033.	3.6	54
50	Oxytocin and the salience of social cues. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 9033-9034.	7.1	53
51	Prediction Error Representation in Individuals With Generalized Anxiety Disorder During Passive Avoidance. American Journal of Psychiatry, 2017, 174, 110-117.	7.2	52
52	Dynamics of Parietal Neural Activity during Spatial Cognitive Processing. Neuron, 2005, 47, 885-891.	8.1	49
53	Effects of dopamine depletion on information flow between the subthalamic nucleus and external globus pallidus. Journal of Neurophysiology, 2011, 106, 2012-2023.	1.8	49
54	Jumping to conclusions in schizophrenia. Neuropsychiatric Disease and Treatment, 2015, 11, 1615.	2.2	49

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55	Injection of a Dopamine Type 2 Receptor Antagonist into the Dorsal Striatum Disrupts Choices Driven by Previous Outcomes, But Not Perceptual Inference. Journal of Neuroscience, 2015, 35, 6298-6306.	3.6	49
56	Anticipatory Threat Responding: Associations With Anxiety, Development, and Brain Structure. Biological Psychiatry, 2020, 87, 916-925.	1.3	48
57	Parietal Representation of Hand Velocity in a Copy Task. Journal of Neurophysiology, 2005, 93, 508-518.	1.8	46
58	Effects of Dopamine Depletion on Network Entropy in the External Globus Pallidus. Journal of Neurophysiology, 2009, 102, 1092-1102.	1.8	46
59	Salivary cortisol levels in Parkinson's disease and its correlation to risk behaviour. Journal of Neurology, Neurosurgery and Psychiatry, 2011, 82, 1107-1111.	1.9	46
60	Oxytocin modulates fMRI responses to facial expression in macaques. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E3123-30.	7.1	46
61	Statistical Analysis of Parieto-Frontal Cognitive-Motor Networks. Journal of Neurophysiology, 2009, 102, 1911-1920.	1.8	45
62	Primate Orbitofrontal Cortex Codes Information Relevant for Managing Exploreâ€“Exploit Tradeoffs. Journal of Neuroscience, 2020, 40, 2553-2561.	3.6	45
63	Effects of Ventral Striatum Lesions on Stimulus-Based versus Action-Based Reinforcement Learning. Journal of Neuroscience, 2017, 37, 6902-6914.	3.6	43
64	Clinical aspects of impulsive compulsive behaviours in Parkinson's disease. Journal of the Neurological Sciences, 2011, 310, 183-188.	0.6	42
65	Reinforcement-learning in fronto-striatal circuits. Neuropsychopharmacology, 2022, 47, 147-162.	5.4	41
66	Uncertainty about mapping future actions into rewards may underlie performance on multiple measures of impulsivity in behavioral addiction: Evidence from Parkinson's disease.. Behavioral Neuroscience, 2013, 127, 245-255.	1.2	40
67	Real-Time Dopamine Measurement in Awake Monkeys. PLoS ONE, 2014, 9, e98692.	2.5	40
68	Dopamine Agonists Rather than Deep Brain Stimulation Cause Reflection Impulsivity in Parkinson's Disease. Journal of Parkinson's Disease, 2013, 3, 139-144.	2.8	39
69	Differential Coding of Conspecific Vocalizations in the Ventral Auditory Cortical Stream. Journal of Neuroscience, 2014, 34, 4665-4676.	3.6	39
70	High channel count single-unit recordings from nonhuman primate frontal cortex. Journal of Neuroscience Methods, 2017, 289, 39-47.	2.5	38
71	Exposure therapy for pediatric irritability: Theory and potential mechanisms. Behaviour Research and Therapy, 2019, 118, 141-149.	3.1	36
72	Mental Maze Solving. Journal of Cognitive Neuroscience, 2000, 12, 813-827.	2.3	35

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73	Integration of social and utilitarian factors in decision making.. Emotion, 2009, 9, 599-608.	1.8	33
74	A Comparison of Auditory Oddball Responses in Dorsolateral Prefrontal Cortex, Basolateral Amygdala, and Auditory Cortex of Macaque. Journal of Cognitive Neuroscience, 2019, 31, 1054-1064.	2.3	32
75	Stochastic reinforcement benefits skill acquisition. Learning and Memory, 2014, 21, 140-142.	1.3	31
76	Hypothalamic Interactions with Large-Scale Neural Circuits Underlying Reinforcement Learning and Motivated Behavior. Trends in Neurosciences, 2020, 43, 681-694.	8.6	30
77	A Selective Emotional Decision-Making Bias Elicited by Facial Expressions. PLoS ONE, 2012, 7, e33461.	2.5	30
78	Differential neural reward mechanisms in treatment-responsive and treatment-resistant schizophrenia. Psychological Medicine, 2018, 48, 2418-2427.	4.5	29
79	Dimensionality, information and learning in prefrontal cortex. PLoS Computational Biology, 2020, 16, e1007514.	3.2	29
80	The effects of a single dose of oxytocin on working memory in schizophrenia. Schizophrenia Research, 2015, 162, 62-63.	2.0	28
81	Ventral striatumâ€™s role in learning from gains and losses. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E12398-E12406.	7.1	28
82	Effects of Emotional Preferences on Value-based Decision-making Are Mediated by Mentalizing and Not Reward Networks. Journal of Cognitive Neuroscience, 2011, 23, 2197-2210.	2.3	26
83	Anxiety symptoms and children's eye gaze during fear learning. Journal of Child Psychology and Psychiatry and Allied Disciplines, 2017, 58, 1276-1286.	5.2	26
84	Impulsivity in Parkinsonâ€™s Disease Is Associated With Alterations in Affective and Sensorimotor Striatal Networks. Frontiers in Neurology, 2018, 9, 279.	2.4	26
85	Directional interconnectivity of the human amygdala, fusiform gyrus, and orbitofrontal cortex in emotional scene perception. Journal of Neurophysiology, 2019, 122, 1530-1537.	1.8	26
86	Increased reflection impulsivity in patients with ephedroneâ€induced <scp>P</scp>arkinsonism. Addiction, 2013, 108, 771-779.	3.3	25
87	Cross-Frequency Power Coupling Between Hierarchically Organized Face-Selective Areas. Cerebral Cortex, 2014, 24, 2409-2420.	2.9	25
88	Frontal-Parietal and Limbic-Striatal Activity Underlies Information Sampling in the Best Choice Problem. Cerebral Cortex, 2015, 25, 972-982.	2.9	25
89	Participation of primary motor cortical neurons in a distributed network during maze solution: representation of spatial parameters and time-course comparison with parietal area 7a. Experimental Brain Research, 2004, 158, 28-34.	1.5	24
90	Performance on a probabilistic inference task in healthy subjects receiving ketamine compared with patients with schizophrenia. Journal of Psychopharmacology, 2012, 26, 1211-1217.	4.0	24

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91	Poisson or Not Poisson: Differences in Spike Train Statistics between Parietal Cortical Areas. Neuron, 2009, 62, 310-311.	8.1	23
92	Effects of dopamine medication on sequence learning with stochastic feedback in Parkinsonâ€™s disease. Frontiers in Systems Neuroscience, 2010, 4, .	2.5	22
93	Perceptual decision-making in patients with Parkinsonâ€™s disease. Journal of Psychopharmacology, 2014, 28, 1149-1154.	4.0	22
94	Signature Patterns for Top-Down and Bottom-Up Information Processing via Cross-Frequency Coupling in Macaque Auditory Cortex. ENeuro, 2019, 6, ENEURO.0467-18.2019.	1.9	21
95	Brain Structural Substrates of Reward Dependence during Behavioral Performance. Journal of Neuroscience, 2014, 34, 16433-16441.	3.6	20
96	Using model systems to understand errant plasticity mechanisms in psychiatric disorders. Nature Neuroscience, 2016, 19, 1418-1425.	14.8	20
97	Principal and Independent Components of Macaque Vocalizations: Constructing Stimuli to Probe High-Level Sensory Processing. Journal of Neurophysiology, 2004, 91, 2897-2909.	1.8	19
98	Jumping to conclusions in untreated patients with Parkinson's disease. Neuropsychologia, 2016, 85, 19-23.	1.6	19
99	Altruistic punishment in patients with Parkinson's disease with and without impulsive behaviour. Neuropsychologia, 2011, 49, 103-107.	1.6	18
100	Differential contribution of superior parietal and dorsalâ€“lateral prefrontal cortices in copying. Cortex, 2009, 45, 432-441.	2.4	17
101	Distributed acoustic cues for caller identity in macaque vocalization. Royal Society Open Science, 2015, 2, 150432.	2.4	15
102	The value of novelty in schizophrenia. Schizophrenia Research, 2018, 192, 287-293.	2.0	15
103	Sequence Learning Under Uncertainty in Children: Self-Reflection vs. Self-Assertion. Frontiers in Psychology, 2012, 3, 127.	2.1	14
104	Effects of Amygdala Lesions on Object-Based Versus Action-Based Learning in Macaques. Cerebral Cortex, 2021, 31, 529-546.	2.9	14
105	Cognitive control network connectivity differentially disrupted in treatment resistant schizophrenia. NeuroImage: Clinical, 2021, 30, 102631.	2.7	13
106	Reward-related choices determine information timing and flow across macaque lateral prefrontal cortex. Nature Communications, 2021, 12, 894.	12.8	13
107	Individual associations of adolescent alcohol use disorder versus cannabis use disorder symptoms in neural prediction error signaling and the response to novelty. Developmental Cognitive Neuroscience, 2021, 48, 100944.	4.0	13
108	Pruning recurrent neural networks replicates adolescent changes in working memory and reinforcement learning. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	13

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109	Differential coding of goals and actions in ventral and dorsal corticostriatal circuits during goal-directed behavior. Cell Reports, 2022, 38, 110198.	6.4	12
110	Learning to select actions shapes recurrent dynamics in the corticostriatal system. Neural Networks, 2020, 132, 375-393.	5.9	11
111	Inference as a fundamental process in behavior. Current Opinion in Behavioral Sciences, 2021, 38, 8-13.	3.9	11
112	Amygdala and ventral striatum population codes implement multiple learning rates for reinforcement learning. , 2017, , .		10
113	Reflection impulsivity perceptual decisionâ€making in patients with restless legs syndrome. Annals of Clinical and Translational Neurology, 2018, 5, 315-322.	3.7	10
114	In a Rush to Decide: Deep Brain Stimulation and Dopamine Agonist Therapy in Parkinson's Disease. Journal of Parkinson's Disease, 2014, 4, 579-583.	2.8	9
115	Effects of Dopamine on Sensitivity to Social Bias in Parkinson's Disease. PLoS ONE, 2012, 7, e32889.	2.5	9
116	Organization of parietoprefrontal and temporoprefrontal networks in the macaque. Journal of Neurophysiology, 2021, 126, 1289-1309.	1.8	8
117	The importance of pro-social processing, and ameliorating dysfunction in schizophrenia. An FMRI study of oxytocin. Schizophrenia Research: Cognition, 2022, 27, 100221.	1.3	8
118	Blocking serotonin but not dopamine reuptake alters neural processing during perceptual decision making.. Behavioral Neuroscience, 2016, 130, 461-468.	1.2	7
119	Cross-species convergence in pupillary response: understanding human anxiety via non-human primate amygdala lesion. Social Cognitive and Affective Neuroscience, 2019, 14, 591-599.	3.0	7
120	A convolutional neural network for estimating synaptic connectivity from spike trains. Scientific Reports, 2021, 11, 12087.	3.3	7
121	Correlates of Auditory Decision-Making in Prefrontal, Auditory, and Basal Lateral Amygdala Cortical Areas. Journal of Neuroscience, 2021, 41, 1301-1316.	3.6	7
122	Looking for Mr(s) Right: Decision bias can prevent us from finding the most attractive face. Cognitive Psychology, 2019, 111, 1-14.	2.2	6
123	The role of cognitive control in the positive symptoms of psychosis. NeuroImage: Clinical, 2022, 34, 103004.	2.7	6
124	Unbelievable: Neural Correlate of the Feedback Negativity in the Anterior Cingulate. Neuron, 2017, 95, 237-239.	8.1	5
125	Computational modeling of threat learning reveals links with anxiety and neuroanatomy in humans. ELife, 2022, 11, .	6.0	5
126	Neural Correlates of Sequence Learning with Stochastic Feedback. Journal of Cognitive Neuroscience, 2011, 23, 1346-1357.	2.3	4

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127	A systematic approach to selecting task relevant neurons. Journal of Neuroscience Methods, 2015, 245, 156-168.	2.5	4
128	Dopamine manipulations drive changes in information sampling in healthy volunteers. Journal of Psychopharmacology, 2019, 33, 670-677.	4.0	4
129	Ventral striatum lesions do not affect reinforcement learning with deterministic outcomes on slow time scales.. Behavioral Neuroscience, 2017, 131, 385-391.	1.2	4
130	Self-tuition as an essential design feature of the brain. Philosophical Transactions of the Royal Society B: Biological Sciences, 2022, 377, 20200530.	4.0	4
131	Intelligence matters for stochastic feedback processing during sequence learning in adolescents and young adults. Intelligence, 2021, 86, 101542.	3.0	3
132	Neural correlates of risky decision making in Parkinsonâ€™s disease patients with impulse control disorders. Experimental Brain Research, 2022, 240, 2241-2253.	1.5	3
133	Deliberative Choice Strategies in Youths: Relevance to Transdiagnostic Anxiety Symptoms. Clinical Psychological Science, 2021, 9, 979-989.	4.0	2
134	Looking into the future. ELife, 2014, 3, e03146.	6.0	2
135	376. Subcortical Contributions to the Explore-Exploit Tradeoff. Biological Psychiatry, 2017, 81, S154.	1.3	2
136	Do Parkinson's Disease Patients Have Deficits in Sequential Sampling Tasks?. Movement Disorders Clinical Practice, 2014, 1, 325-328.	1.5	1
137	Pavlovian patterns in the amygdala. Nature Neuroscience, 2019, 22, 1949-1950.	14.8	1
138	Fluoxetine incentivizes ventral striatum encoding of reward and punishment. Neuropsychopharmacology, 2021, 46, 2041-2042.	5.4	1
139	Hierarchical Reinforcement Learning, Sequential Behavior, and the Dorsal Frontostriatal System. Journal of Cognitive Neuroscience, 2022, , 1-19.	2.3	1
140	Shared mechanisms mediate the explore-exploit tradeoff in macaques and humans. Neuron, 2022, 110, 1751-1753.	8.1	1
141	S18. Computational Modeling of Threat Learning: Associations With Anxiety, Age, and Brain Structure. Biological Psychiatry, 2019, 85, S303.	1.3	0
142	Mortimer Mishkin (1926â€“2021): A life of science with humility and grace. Neuron, 2021, 109, 3392-3394.	8.1	0
143	Dimensionality, information and learning in prefrontal cortex. , 2020, 16, e1007514.		0
144	Dimensionality, information and learning in prefrontal cortex. , 2020, 16, e1007514.		0

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145	Dimensionality, information and learning in prefrontal cortex. , 2020, 16, e1007514.		0
146	Dimensionality, information and learning in prefrontal cortex. , 2020, 16, e1007514.		0