Barry E Stein

List of Publications by Year
in descending order

123 papers	12,150 citations	26610 56 h-index	26591 107 g-index
127 all docs	127 docs citations	127 times ranked	4838 citing authors

#	Article	IF	Citations
1	Multisensory integration: current issues from the perspective of the single neuron. Nature Reviews Neuroscience, 2008, 9, 255-266.	4.9	1,180
2	Sources of subcortical projections to the superior colliculus in the cat. Journal of Comparative Neurology, 1979, 184, 309-329.	0.9	656
3	Subcortical loops through the basal ganglia. Trends in Neurosciences, 2005, 28, 401-407.	4.2	394
4	Spatial factors determine the activity of multisensory neurons in cat superior colliculus. Brain Research, 1986, 365, 350-354.	1.1	368
5	Behavioral Indices of Multisensory Integration: Orientation to Visual Cues is Affected by Auditory Stimuli. Journal of Cognitive Neuroscience, 1989, 1, 12-24.	1.1	357
6	Enhancement of Perceived Visual Intensity by Auditory Stimuli: A Psychophysical Analysis. Journal of Cognitive Neuroscience, 1996, 8, 497-506.	1.1	348
7	A revised view of sensory cortical parcellation. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 2167-2172.	3.3	315
8	Unimodal and multimodal response properties of neurons in the cat's superior colliculus. Experimental Neurology, 1972, 36, 179-196.	2.0	293
9	Neural mechanisms for synthesizing sensory information and producing adaptive behaviors. Experimental Brain Research, 1998, 123, 124-135.	0.7	285
10	Development of Multisensory Neurons and Multisensory Integration in Cat Superior Colliculus. Journal of Neuroscience, 1997, 17, 2429-2444.	1.7	282
11	Development of multisensory integration from the perspective of the individual neuron. Nature Reviews Neuroscience, 2014, 15, 520-535.	4.9	278
12	Neurons and behavior: the same rules of multisensory integration apply. Brain Research, 1988, 448, 355-358.	1.1	260
13	Evaluating the Operations Underlying Multisensory Integration in the Cat Superior Colliculus. Journal of Neuroscience, 2005, 25, 6499-6508.	1.7	245
14	Multisensory Integration in the Superior Colliculus of the Alert Cat. Journal of Neurophysiology, 1998, 80, 1006-1010.	0.9	240
15	An irrelevant light enhances auditory detection in humans: a psychophysical analysis of multisensory integration in stimulus detection. Cognitive Brain Research, 2003, 17, 447-453.	3.3	234
16	Integration of multiple sensory modalities in cat cortex. Experimental Brain Research, 1992, 91, 484-8.	0.7	215
17	Two Cortical Areas Mediate Multisensory Integration in Superior Colliculus Neurons. Journal of Neurophysiology, 2001, 85, 506-522.	0.9	196
18	Early Experience Determines How the Senses Will Interact. Journal of Neurophysiology, 2007, 97, 921-926.	0.9	187

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19	Challenges in quantifying multisensory integration: alternative criteria, models, and inverse effectiveness. Experimental Brain Research, 2009, 198, 113-26.	0.7	168
20	Multisensory Integration Shortens Physiological Response Latencies. Journal of Neuroscience, 2007, 27, 5879-5884.	1.7	166
21	Visual Experience Is Necessary for the Development of Multisensory Integration. Journal of Neuroscience, 2004, 24, 9580-9584.	1.7	163
22	On the use of superadditivity as a metric for characterizing multisensory integration in functional neuroimaging studies. Experimental Brain Research, 2005, 166, 289-297.	0.7	162
23	Superior Colliculus Neurons Use Distinct Operational Modes in the Integration of Multisensory Stimuli. Journal of Neurophysiology, 2005, 93, 2575-2586.	0.9	149
24	Mechanisms of Within- and Cross-Modality Suppression in the Superior Colliculus. Journal of Neurophysiology, 1997, 78, 2834-2847.	0.9	145
25	Opposing basal ganglia processes shape midbrain visuomotor activity bilaterally. Nature, 2003, 423, 982-986.	13.7	141
26	The neural basis of multisensory integration in the midbrain: Its organization and maturation. Hearing Research, 2009, 258, 4-15.	0.9	135
27	Control of Pinna Movements and Sensorimotor Register in Cat Superior Colliculus. Brain, Behavior and Evolution, 1981, 19, 180-192.	0.9	131
28	Two Corticotectal Areas Facilitate Multisensory Orientation Behavior. Journal of Cognitive Neuroscience, 2002, 14, 1240-1255.	1.1	131
29	Somatosensory cortex: a â€˜newâ€™ somatotopic representation. Brain Research, 1982, 235, 162-168.	1.1	130
30	Sensory and Multisensory Responses in the Newborn Monkey Superior Colliculus. Journal of Neuroscience, 2001, 21, 8886-8894.	1.7	127
31	Sensory representation in reptilian optic tectum: Some comparisons with mammals. Journal of Comparative Neurology, 1981, 202, 69-87.	0.9	121
32	Superadditivity in multisensory integration: putting the computation in context. NeuroReport, 2007, 18, 787-792.	0.6	121
33	Chapter 20 Comparisons of cross-modality integration in midbrain and cortex. Progress in Brain Research, 1996, 112, 289-299.	0.9	113
34	The Development of Cortical Multisensory Integration. Journal of Neuroscience, 2006, 26, 11844-11849.	1.7	112
35	Visual Deprivation Alters the Development of Cortical Multisensory Integration. Journal of Neurophysiology, 2007, 98, 2858-2867.	0.9	107
36	Semantic confusion regarding the development of multisensory integration: a practical solution. European Journal of Neuroscience, 2010, 31, 1713-1720.	1.2	107

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37	Cross-modal sensory processing in the anterior cingulate and medial prefrontal cortices. Human Brain Mapping, 2003, 19, 213-223.	1.9	103
38	Properties of superior colliculus neurons in the golden hamster. Journal of Comparative Neurology, 1979, 183, 269-284.	0.9	98
39	Multisensory Versus Unisensory Integration: Contrasting Modes in the Superior Colliculus. Journal of Neurophysiology, 2007, 97, 3193-3205.	0.9	96
40	The organization of trigeminotectal and trigeminothalamic neurons in rodents: A double-labeling study with fluorescent dyes. Journal of Comparative Neurology, 1987, 262, 315-330.	0.9	94
41	Neuron-Specific Response Characteristics Predict the Magnitude of Multisensory Integration. Journal of Neurophysiology, 2003, 90, 4022-4026.	0.9	93
42	The influence of visual and auditory receptive field organization on multisensory integration in the superior colliculus. Experimental Brain Research, 2001, 139, 303-310.	0.7	91
43	The Differing Impact of Multisensory and Unisensory Integration on Behavior. Journal of Neuroscience, 2009, 29, 4897-4902.	1.7	88
44	Initiating the Development of Multisensory Integration by Manipulating Sensory Experience. Journal of Neuroscience, 2010, 30, 4904-4913.	1.7	84
45	Nociceptive neurones in rat superior colliculus. Experimental Brain Research, 1996, 109, 185-196.	0.7	83
46	Nociceptive neurones in rat superior colliculus. Experimental Brain Research, 1996, 109, 197-208.	0.7	81
47	Small lateral suprasylvian cortex lesions produce visual neglect and decreased visual activity in the superior colliculus. Journal of Comparative Neurology, 1988, 273, 527-542.	0.9	78
48	Cross-modal localization in hemianopia: new insights on multisensory integration. Brain, 2008, 131, 855-865.	3.7	75
49	Cortex Mediates Multisensory But Not Unisensory Integration in Superior Colliculus. Journal of Neuroscience, 2007, 27, 12775-12786.	1.7	72
50	Superior colliculus cells respond to noxious stimuli. Brain Research, 1978, 158, 65-73.	1.1	71
51	Chapter 21 Sensory organization of the superior colliculus in cat and monkey. Progress in Brain Research, 1996, 112, 301-311.	0.9	67
52	A Model of the Neural Mechanisms Underlying Multisensory Integration in the Superior Colliculus. Perception, 2007, 36, 1431-1443.	0.5	64
53	Cortex Controls Multisensory Depression in Superior Colliculus. Journal of Neurophysiology, 2003, 90, 2123-2135.	0.9	63
54	Incorporating Cross-Modal Statistics in the Development and Maintenance of Multisensory Integration. Journal of Neuroscience, 2012, 32, 2287-2298.	1.7	61

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55	The use of tactile and olfactory cues in neonatal orientation and localization of the nipple. Developmental Psychobiology, 1984, 17, 423-436.	0.9	60
56	Multisensory Integration in the Superior Colliculus Requires Synergy among Corticocollicular Inputs. Journal of Neuroscience, 2009, 29, 6580-6592.	1.7	58
57	A Bayesian model unifies multisensory spatial localization with the physiological properties of the superior colliculus. Experimental Brain Research, 2007, 180, 153-161.	0.7	57
58	Multisensory-Mediated Auditory Localization. Perception, 2007, 36, 1477-1485.	0.5	55
59	A chronic headholder minimizing facial obstructions. Brain Research Bulletin, 1983, 10, 859-860.	1.4	50
60	Organization and plasticity in multisensory integration. Progress in Brain Research, 2011, 191, 145-163.	0.9	49
61	What does a neuron learn from multisensory experience?. Journal of Neurophysiology, 2015, 113, 883-889.	0.9	49
62	Adult Plasticity in Multisensory Neurons: Short-Term Experience-Dependent Changes in the Superior Colliculus. Journal of Neuroscience, 2009, 29, 15910-15922.	1.7	48
63	Maturation of cortical control over superior colliculus cells in cat. Brain Research, 1981, 223, 429-435.	1.1	47
64	Neonatal Cortical Ablation Disrupts Multisensory Development in Superior Colliculus. Journal of Neurophysiology, 2006, 95, 1380-1396.	0.9	47
65	The development of a dialogue between cortex and midbrain to integrate multisensory information. Experimental Brain Research, 2005, 166, 305-315.	0.7	46
66	Somatotopic component of the multisensory map in the deep laminae of the cat superior colliculus. Journal of Comparative Neurology, 1991, 312, 353-370.	0.9	44
67	A neural network model of multisensory integration also accounts for unisensory integration in superior colliculus. Brain Research, 2008, 1242, 13-23.	1.1	43
68	Corticothalamic and corticotectal somatosensory projections from the anterior ectosylvian sulcus (SIV cortex) in neonatal cats: An anatomical demonstration with HRP and3H-leucine. Journal of Comparative Neurology, 1988, 274, 115-126.	0.9	42
69	Multisensory Orientation Behavior Is Disrupted by Neonatal Cortical Ablation. Journal of Neurophysiology, 2007, 97, 557-562.	0.9	41
70	Parallel analyses of nociceptive neurones in rat superior colliculus by using c-fos immunohistochemistry and electrophysiology under different conditions of anaesthesia. Journal of Comparative Neurology, 2000, 425, 599-615.	0.9	39
71	An emergent model of multisensory integration in superior colliculus neurons. Frontiers in Integrative Neuroscience, 2010, 4, 6.	1.0	39
72	Efferent projections of the neonatal superior colliculus: Extraoculomotor-related brain stem structures. Brain Research, 1982, 239, 17-28.	1.1	38

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73	Postnatal development of acetylcholinesterase in, and cholinergic projections to, the cat superior colliculus. Journal of Comparative Neurology, 1991, 313, 113-131.	0.9	38
74	Multisensory Integration and the Society for Neuroscience: Then and Now. Journal of Neuroscience, 2020, 40, 3-11.	1.7	38
75	Relative Unisensory Strength and Timing Predict Their Multisensory Product. Journal of Neuroscience, 2015, 35, 5213-5220.	1.7	37
76	The Psychophysical Attributes of Heat-Induced Pain and Their Relationships to Neural Mechanisms. Journal of Cognitive Neuroscience, 1992, 4, 1-14.	1.1	36
77	Response properties of nociceptive and low-threshold neurons in rat trigeminal pars caudalis. Journal of Comparative Neurology, 1994, 347, 409-425.	0.9	36
78	Temporal profiles of response enhancement in multisensory integration. Frontiers in Neuroscience, 2008, 2, 218-224.	1.4	36
79	Multisensory plasticity in adulthood: cross-modal experience enhances neuronal excitability and exposes silent inputs. Journal of Neurophysiology, 2013, 109, 464-474.	0.9	36
80	Noiseâ€rearing disrupts the maturation of multisensory integration. European Journal of Neuroscience, 2014, 39, 602-613.	1.2	36
81	Multisensory integration produces an initial response enhancement. Frontiers in Integrative Neuroscience, 2007, 1, 4.	1.0	35
82	Multisensory training reverses midbrain lesion-induced changes and ameliorates haemianopia. Nature Communications, 2015, 6, 7263.	5.8	34
83	Brief Cortical Deactivation Early in Life Has Long-Lasting Effects on Multisensory Behavior. Journal of Neuroscience, 2014, 34, 7198-7202.	1.7	33
84	Excitotoxic lesions of the superior colliculus preferentially impact multisensory neurons and multisensory integration. Experimental Brain Research, 2007, 179, 325-338.	0.7	32
85	Chapter 10 Nonvisual influences on visual-information processing in the superior colliculus. Progress in Brain Research, 2001, 134, 143-156.	0.9	30
86	Cortex Contacts both Output Neurons and Nitrergic Interneurons in the Superior Colliculus: Direct and Indirect Routes for Multisensory Integration. Cerebral Cortex, 2008, 18, 1640-1652.	1.6	28
87	Development of cortical influences on superior colliculus multisensory neurons: effects of darkâ€rearing. European Journal of Neuroscience, 2013, 37, 1594-1601.	1.2	28
88	Transient projections from the lateral geniculate to the posteromedial lateral suprasylvian visual cortex in kittens. Journal of Comparative Neurology, 1988, 278, 287-302.	0.9	27
89	Chapter 13 Corticotectal relationships: direct and â€œindirectâ€•corticotectal pathways. Progress in Brain Research, 1993, 95, 139-150.	0.9	26
90	Development of the Mechanisms Governing Midbrain Multisensory Integration. Journal of Neuroscience, 2018, 38, 3453-3465.	1.7	26

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91	A computational study of multisensory maturation in the superior colliculus (SC). Experimental Brain Research, 2011, 213, 341-349.	0.7	25
92	Transient tectogeniculate projections in neonatal kittens: An autoradiographic study. Journal of Comparative Neurology, 1985, 239, 402-412.	0.9	23
93	Multisensory Plasticity in Superior Colliculus Neurons is Mediated by Association Cortex. Cerebral Cortex, 2016, 26, 1130-1137.	1.6	23
94	Trigeminotectal and other trigeminofugal projections in neonatal kittens: An anatomical demonstration with horseradish peroxidase and tritiated leucine. Journal of Comparative Neurology, 1986, 249, 411-427.	0.9	22
95	Axon Morphologies and Convergence Patterns of Projections from Different Sensory-Specific Cortices of the Anterior Ectosylvian Sulcus onto Multisensory Neurons in the Cat Superior Colliculus. Cerebral Cortex, 2009, 19, 2902-2915.	1.6	22
96	Multisensory Integration Uses a Real-Time Unisensoryâ€"Multisensory Transform. Journal of Neuroscience, 2017, 37, 5183-5194.	1.7	22
97	Alterations to multisensory and unisensory integration by stimulus competition. Journal of Neurophysiology, 2011, 106, 3091-3101.	0.9	21
98	Postnatal Experiences Influence How the Brain Integrates Information from Different Senses. Frontiers in Integrative Neuroscience, 2009, 3, 21.	1.0	20
99	Cross-Modal Competition: The Default Computation for Multisensory Processing. Journal of Neuroscience, 2019, 39, 1374-1385.	1.7	20
100	Development of multisensory integration: Transforming sensory input into motor output. Mental Retardation and Developmental Disabilities Research Reviews, 1999, 5, 72-85.	3.5	19
101	A model of the temporal dynamics of multisensory enhancement. Neuroscience and Biobehavioral Reviews, 2014, 41, 78-84.	2.9	17
102	Non-Stationarity in Multisensory Neurons in the Superior Colliculus. Frontiers in Psychology, 2011, 2, 144.	1.1	16
103	Using superior colliculus principles of multisensory integration to reverse hemianopia. Neuropsychologia, 2020, 141, 107413.	0.7	16
104	The normal environment delays the development of multisensory integration. Scientific Reports, 2017, 7, 4772.	1.6	15
105	Experience Creates the Multisensory Transform in the Superior Colliculus. Frontiers in Integrative Neuroscience, 2020, 14, 18.	1.0	14
106	Receptive field properties of somatosensory neurons in the cat superior colliculus. Journal of Comparative Neurology, 1991, 314, 534-544.	0.9	13
107	Using the Principles of Multisensory Integration to Reverse Hemianopia. Cerebral Cortex, 2020, 30, 2030-2041.	1.6	13
108	Maturation of multisensory integration in the superior colliculus: Expression of nitric oxide synthase and neurofilament SMI-32. Brain Research, 2008, 1242, 45-53.	1.1	12

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109	Interhemispheric visual competition after multisensory reversal of hemianopia. European Journal of Neuroscience, 2019, 50, 3702-3712.	1.2	10
110	Stimulus value gates multisensory integration. European Journal of Neuroscience, 2021, 53, 3142-3159.	1.2	9
111	Multisensory enhancement of overt behavior requires multisensory experience. European Journal of Neuroscience, 2021, 54, 4514-4527.	1.2	9
112	Neural development of multisensory integration. , 2020, , 57-87.		6
113	Reversing Hemianopia by Multisensory Training Under Anesthesia. Frontiers in Systems Neuroscience, 2020, 14, 4.	1.2	5
114	Hippocampus and superior colliculus: Interdependence or independence?. Behavioral and Brain Sciences, 1987, 10, 131-131.	0.4	3
115	Multisensory Integration, Principles of. , 2015, , 94-102.		3
116	Noise-rearing precludes the behavioral benefits of multisensory integration. Cerebral Cortex, 2022, , .	1.6	3
117	Pulsed Stimuli Elicit More Robust Multisensory Enhancement than Expected. Frontiers in Integrative Neuroscience, 2017, 11, 40.	1.0	2
118	Association Cortex Is Essential to Reverse Hemianopia by Multisensory Training. Cerebral Cortex, 2021, 31, 5015-5023.	1.6	2
119	The Organization and Plasticity of Multisensory Integration in the Midbrain. Frontiers in Neuroscience, 2011, , 279-300.	0.0	1
120	The Organization and Plasticity of Multisensory Integration in the Midbrain. Frontiers in Neuroscience, 2011, , 279-300.	0.0	1
121	Different neural circuits underlie different crossâ€modal spatial judgments (Commentary on) Tj ETQq1 1 0.784314 rgBT /Overlock 10	1.2	0
122	Cortex rules: The neural mechanisms differentiating multisensory integration and unisensory integration in the midbrain. FASEB Journal, 2009, 23, 185.2.	0.2	0
123	Development of the superior colliculus/optic tectum. , 2020, , 57-78.		0