Barry E Stein

List of Publications by Year
in descending order

123	12,150	26610 56	26591 107
papers	citations	h-index	g-index

127	127	127	4838
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Noise-rearing precludes the behavioral benefits of multisensory integration. Cerebral Cortex, 2022, , .	1.6	3
2	Stimulus value gates multisensory integration. European Journal of Neuroscience, 2021, 53, 3142-3159.	1.2	9
3	Association Cortex Is Essential to Reverse Hemianopia by Multisensory Training. Cerebral Cortex, 2021, 31, 5015-5023.	1.6	2
4	Multisensory enhancement of overt behavior requires multisensory experience. European Journal of Neuroscience, 2021, 54, 4514-4527.	1.2	9
5	Using the Principles of Multisensory Integration to Reverse Hemianopia. Cerebral Cortex, 2020, 30, 2030-2041.	1.6	13
6	Neural development of multisensory integration. , 2020, , 57-87.		6
7	Multisensory Integration and the Society for Neuroscience: Then and Now. Journal of Neuroscience, 2020, 40, 3-11.	1.7	38
8	Reversing Hemianopia by Multisensory Training Under Anesthesia. Frontiers in Systems Neuroscience, 2020, 14, 4.	1.2	5
9	Using superior colliculus principles of multisensory integration to reverse hemianopia. Neuropsychologia, 2020, 141, 107413.	0.7	16
10	Experience Creates the Multisensory Transform in the Superior Colliculus. Frontiers in Integrative Neuroscience, 2020, 14, 18.	1.0	14
11	Development of the superior colliculus/optic tectum. , 2020, , 57-78.		0
12	Interhemispheric visual competition after multisensory reversal of hemianopia. European Journal of Neuroscience, 2019, 50, 3702-3712.	1.2	10
13	Cross-Modal Competition: The Default Computation for Multisensory Processing. Journal of Neuroscience, 2019, 39, 1374-1385.	1.7	20
14	Development of the Mechanisms Governing Midbrain Multisensory Integration. Journal of Neuroscience, 2018, 38, 3453-3465.	1.7	26
15	Multisensory Integration Uses a Real-Time Unisensoryâ€“Multisensory Transform. Journal of Neuroscience, 2017, 37, 5183-5194.	1.7	22
16	The normal environment delays the development of multisensory integration. Scientific Reports, 2017, 7, 4772.	1.6	15
17	Pulsed Stimuli Elicit More Robust Multisensory Enhancement than Expected. Frontiers in Integrative Neuroscience, 2017, 11, 40.	1.0	2
18	Multisensory Plasticity in Superior Colliculus Neurons is Mediated by Association Cortex. Cerebral Cortex, 2016, 26, 1130-1137.	1.6	23

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19	Multisensory Integration, Principles of. , 2015, , 94-102.		3
20	Multisensory training reverses midbrain lesion-induced changes and ameliorates haemianopia. Nature Communications, 2015, 6, 7263.	5.8	34
21	What does a neuron learn from multisensory experience?. Journal of Neurophysiology, 2015, 113, 883-889.	0.9	49
22	Relative Unisensory Strength and Timing Predict Their Multisensory Product. Journal of Neuroscience, 2015, 35, 5213-5220.	1.7	37
23	Noiseâ€rearing disrupts the maturation of multisensory integration. European Journal of Neuroscience, 2014, 39, 602-613.	1.2	36
24	Brief Cortical Deactivation Early in Life Has Long-Lasting Effects on Multisensory Behavior. Journal of Neuroscience, 2014, 34, 7198-7202.	1.7	33
25	Development of multisensory integration from the perspective of the individual neuron. Nature Reviews Neuroscience, 2014, 15, 520-535.	4.9	278
26	A model of the temporal dynamics of multisensory enhancement. Neuroscience and Biobehavioral Reviews, 2014, 41, 78-84.	2.9	17
27	Development of cortical influences on superior colliculus multisensory neurons: effects of darkâ€rearing. European Journal of Neuroscience, 2013, 37, 1594-1601.	1.2	28
28	Multisensory plasticity in adulthood: cross-modal experience enhances neuronal excitability and exposes silent inputs. Journal of Neurophysiology, 2013, 109, 464-474.	0.9	36
29	Incorporating Cross-Modal Statistics in the Development and Maintenance of Multisensory Integration. Journal of Neuroscience, 2012, 32, 2287-2298.	1.7	61
30	Non-Stationarity in Multisensory Neurons in the Superior Colliculus. Frontiers in Psychology, 2011, 2, 144.	1.1	16
31	A computational study of multisensory maturation in the superior colliculus (SC). Experimental Brain Research, 2011, 213, 341-349.	0.7	25
32	Alterations to multisensory and unisensory integration by stimulus competition. Journal of Neurophysiology, 2011, 106, 3091-3101.	0.9	21
33	Organization and plasticity in multisensory integration. Progress in Brain Research, 2011, 191, 145-163.	0.9	49
34	The Organization and Plasticity of Multisensory Integration in the Midbrain. Frontiers in Neuroscience, 2011, , 279-300.	0.0	1
35	The Organization and Plasticity of Multisensory Integration in the Midbrain. Frontiers in Neuroscience, 2011, , 279-300.	0.0	1
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	An emergent model of multisensory integration in superior colliculus neurons. Frontiers in Integrative Neuroscience, 2010, 4, 6.	1.0	39
38	Initiating the Development of Multisensory Integration by Manipulating Sensory Experience. Journal of Neuroscience, 2010, 30, 4904-4913.	1.7	84
39	Postnatal Experiences Influence How the Brain Integrates Information from Different Senses. Frontiers in Integrative Neuroscience, 2009, 3, 21.	1.0	20
40	Adult Plasticity in Multisensory Neurons: Short-Term Experience-Dependent Changes in the Superior Colliculus. Journal of Neuroscience, 2009, 29, 15910-15922.	1.7	48
41	The Differing Impact of Multisensory and Unisensory Integration on Behavior. Journal of Neuroscience, 2009, 29, 4897-4902.	1.7	88
42	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
43	Multisensory Integration in the Superior Colliculus Requires Synergy among Corticocollicular Inputs. Journal of Neuroscience, 2009, 29, 6580-6592.	1.7	58
44	Challenges in quantifying multisensory integration: alternative criteria, models, and inverse effectiveness. Experimental Brain Research, 2009, 198, 113-26.	0.7	168
45	Different neural circuits underlie different crossâ€modal spatial judgments (Commentary on) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf	1.2	0
46	The neural basis of multisensory integration in the midbrain: Its organization and maturation. Hearing Research, 2009, 258, 4-15.	0.9	135
47	Cortex rules: The neural mechanisms differentiating multisensory integration and unisensory integration in the midbrain. FASEB Journal, 2009, 23, 185.2.	0.2	0
48	Multisensory integration: current issues from the perspective of the single neuron. Nature Reviews Neuroscience, 2008, 9, 255-266.	4.9	1,180
49	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
50	A neural network model of multisensory integration also accounts for unisensory integration in superior colliculus. Brain Research, 2008, 1242, 13-23.	1.1	43
51	Cross-modal localization in hemianopia: new insights on multisensory integration. Brain, 2008, 131, 855-865.	3.7	75
52	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
53	Temporal profiles of response enhancement in multisensory integration. Frontiers in Neuroscience, 2008, 2, 218-224.	1.4	36
54	Multisensory Integration Shortens Physiological Response Latencies. Journal of Neuroscience, 2007, 27, 5879-5884.	1.7	166

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55	Cortex Mediates Multisensory But Not Unisensory Integration in Superior Colliculus. Journal of Neuroscience, 2007, 27, 12775-12786.	1.7	72
56	Early Experience Determines How the Senses Will Interact. Journal of Neurophysiology, 2007, 97, 921-926.	0.9	187
57	Multisensory Versus Unisensory Integration: Contrasting Modes in the Superior Colliculus. Journal of Neurophysiology, 2007, 97, 3193-3205.	0.9	96
58	Superadditivity in multisensory integration: putting the computation in context. NeuroReport, 2007, 18, 787-792.	0.6	121
59	Multisensory-Mediated Auditory Localization. Perception, 2007, 36, 1477-1485.	0.5	55
60	A Model of the Neural Mechanisms Underlying Multisensory Integration in the Superior Colliculus. Perception, 2007, 36, 1431-1443.	0.5	64
61	Multisensory integration produces an initial response enhancement. Frontiers in Integrative Neuroscience, 2007, 1, 4.	1.0	35
62	Multisensory Orientation Behavior Is Disrupted by Neonatal Cortical Ablation. Journal of Neurophysiology, 2007, 97, 557-562.	0.9	41
63	Visual Deprivation Alters the Development of Cortical Multisensory Integration. Journal of Neurophysiology, 2007, 98, 2858-2867.	0.9	107
64	Excitotoxic lesions of the superior colliculus preferentially impact multisensory neurons and multisensory integration. Experimental Brain Research, 2007, 179, 325-338.	0.7	32
65	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
66	Neonatal Cortical Ablation Disrupts Multisensory Development in Superior Colliculus. Journal of Neurophysiology, 2006, 95, 1380-1396.	0.9	47
67	The Development of Cortical Multisensory Integration. Journal of Neuroscience, 2006, 26, 11844-11849.	1.7	112
68	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
69	The development of a dialogue between cortex and midbrain to integrate multisensory information. Experimental Brain Research, 2005, 166, 305-315.	0.7	46
70	Superior Colliculus Neurons Use Distinct Operational Modes in the Integration of Multisensory Stimuli. Journal of Neurophysiology, 2005, 93, 2575-2586.	0.9	149
71	Evaluating the Operations Underlying Multisensory Integration in the Cat Superior Colliculus. Journal of Neuroscience, 2005, 25, 6499-6508.	1.7	245
72	Subcortical loops through the basal ganglia. Trends in Neurosciences, 2005, 28, 401-407.	4.2	394

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73	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
74	Visual Experience Is Necessary for the Development of Multisensory Integration. Journal of Neuroscience, 2004, 24, 9580-9584.	1.7	163
75	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
76	Cross-modal sensory processing in the anterior cingulate and medial prefrontal cortices. Human Brain Mapping, 2003, 19, 213-223.	1.9	103
77	Opposing basal ganglia processes shape midbrain visuomotor activity bilaterally. Nature, 2003, 423, 982-986.	13.7	141
78	Neuron-Specific Response Characteristics Predict the Magnitude of Multisensory Integration. Journal of Neurophysiology, 2003, 90, 4022-4026.	0.9	93
79	Cortex Controls Multisensory Depression in Superior Colliculus. Journal of Neurophysiology, 2003, 90, 2123-2135.	0.9	63
80	Two Corticotectal Areas Facilitate Multisensory Orientation Behavior. Journal of Cognitive Neuroscience, 2002, 14, 1240-1255.	1.1	131
81	Two Cortical Areas Mediate Multisensory Integration in Superior Colliculus Neurons. Journal of Neurophysiology, 2001, 85, 506-522.	0.9	196
82	Sensory and Multisensory Responses in the Newborn Monkey Superior Colliculus. Journal of Neuroscience, 2001, 21, 8886-8894.	1.7	127
83	Chapter 10 Nonvisual influences on visual-information processing in the superior colliculus. Progress in Brain Research, 2001, 134, 143-156.	0.9	30
84	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
85	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
86	Development of multisensory integration: Transforming sensory input into motor output. Mental Retardation and Developmental Disabilities Research Reviews, 1999, 5, 72-85.	3.5	19
87	Neural mechanisms for synthesizing sensory information and producing adaptive behaviors. Experimental Brain Research, 1998, 123, 124-135.	0.7	285
88	Multisensory Integration in the Superior Colliculus of the Alert Cat. Journal of Neurophysiology, 1998, 80, 1006-1010.	0.9	240
89	Development of Multisensory Neurons and Multisensory Integration in Cat Superior Colliculus. Journal of Neuroscience, 1997, 17, 2429-2444.	1.7	282
90	Mechanisms of Within- and Cross-Modality Suppression in the Superior Colliculus. Journal of Neurophysiology, 1997, 78, 2834-2847.	0.9	145

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91	Chapter 20 Comparisons of cross-modality integration in midbrain and cortex. Progress in Brain Research, 1996, 112, 289-299.	0.9	113
92	Chapter 21 Sensory organization of the superior colliculus in cat and monkey. Progress in Brain Research, 1996, 112, 301-311.	0.9	67
93	Nociceptive neurones in rat superior colliculus. Experimental Brain Research, 1996, 109, 185-196.	0.7	83
94	Nociceptive neurones in rat superior colliculus. Experimental Brain Research, 1996, 109, 197-208.	0.7	81
95	Enhancement of Perceived Visual Intensity by Auditory Stimuli: A Psychophysical Analysis. Journal of Cognitive Neuroscience, 1996, 8, 497-506.	1.1	348
96	Response properties of nociceptive and low-threshold neurons in rat trigeminal pars caudalis. Journal of Comparative Neurology, 1994, 347, 409-425.	0.9	36
97	Chapter 13 Corticotectal relationships: direct and â€œindirectâ€•corticotectal pathways. Progress in Brain Research, 1993, 95, 139-150.	0.9	26
98	The Psychophysical Attributes of Heat-Induced Pain and Their Relationships to Neural Mechanisms. Journal of Cognitive Neuroscience, 1992, 4, 1-14.	1.1	36
99	Integration of multiple sensory modalities in cat cortex. Experimental Brain Research, 1992, 91, 484-8.	0.7	215
100	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
101	Postnatal development of acetylcholinesterase in, and cholinergic projections to, the cat superior colliculus. Journal of Comparative Neurology, 1991, 313, 113-131.	0.9	38
102	Receptive field properties of somatosensory neurons in the cat superior colliculus. Journal of Comparative Neurology, 1991, 314, 534-544.	0.9	13
103	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
104	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
105	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
106	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
107	Neurons and behavior: the same rules of multisensory integration apply. Brain Research, 1988, 448, 355-358.	1.1	260
108	Hippocampus and superior colliculus: Interdependence or independence?. Behavioral and Brain Sciences, 1987, 10, 131-131.	0.4	3

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109	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
110	Spatial factors determine the activity of multisensory neurons in cat superior colliculus. Brain Research, 1986, 365, 350-354.	1.1	368
111	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
112	Transient tectogeniculate projections in neonatal kittens: An autoradiographic study. Journal of Comparative Neurology, 1985, 239, 402-412.	0.9	23
113	The use of tactile and olfactory cues in neonatal orientation and localization of the nipple. Developmental Psychobiology, 1984, 17, 423-436.	0.9	60
114	A chronic headholder minimizing facial obstructions. Brain Research Bulletin, 1983, 10, 859-860.	1.4	50
115	Somatosensory cortex: a â€˜newâ€™ somatotopic representation. Brain Research, 1982, 235, 162-168.	1.1	130
116	Efferent projections of the neonatal superior colliculus: Extraoculomotor-related brain stem structures. Brain Research, 1982, 239, 17-28.	1.1	38
117	Maturation of cortical control over superior colliculus cells in cat. Brain Research, 1981, 223, 429-435.	1.1	47
118	Control of Pinna Movements and Sensorimotor Register in Cat Superior Colliculus. Brain, Behavior and Evolution, 1981, 19, 180-192.	0.9	131
119	Sensory representation in reptilian optic tectum: Some comparisons with mammals. Journal of Comparative Neurology, 1981, 202, 69-87.	0.9	121
120	Properties of superior colliculus neurons in the golden hamster. Journal of Comparative Neurology, 1979, 183, 269-284.	0.9	98
121	Sources of subcortical projections to the superior colliculus in the cat. Journal of Comparative Neurology, 1979, 184, 309-329.	0.9	656
122	Superior colliculus cells respond to noxious stimuli. Brain Research, 1978, 158, 65-73.	1.1	71
123	Unimodal and multimodal response properties of neurons in the cat's superior colliculus. Experimental Neurology, 1972, 36, 179-196.	2.0	293