

# Eric I Knudsen

## List of Publications by Year in descending order

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74  
papers

7,821  
citations

81743

39  
h-index

88477

70  
g-index

75  
all docs

75  
docs citations

75  
times ranked

5750  
citing authors

#	ARTICLE	IF	CITATIONS
1	Sensitive Periods in the Development of the Brain and Behavior. <i>Journal of Cognitive Neuroscience</i> , 2004, 16, 1412-1425.	1.1	1,249
2	Fundamental Components of Attention. <i>Annual Review of Neuroscience</i> , 2007, 30, 57-78.	5.0	778
3	Economic, neurobiological, and behavioral perspectives on building America's future workforce. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 10155-10162.	3.3	763
4	Sound localization by the barn owl ( <i>Tyto alba</i> ) measured with the search coil technique. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 1979, 133, 1-11.	0.7	350
5	Instructed learning in the auditory localization pathway of the barn owl. <i>Nature</i> , 2002, 417, 322-328.	13.7	291
6	Horizontal and vertical components of head movement are controlled by distinct neural circuits in the barn owl. <i>Nature</i> , 1990, 345, 434-437.	13.7	209
7	Auditory-visual fusion in speech perception in children with cochlear implants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 18748-18750.	3.3	197
8	Adaptive auditory plasticity in developing and adult animals. <i>Progress in Neurobiology</i> , 2007, 82, 109-121.	2.8	177
9	Sensitive Periods for Visual Calibration of the Auditory Space Map in the Barn Owl Optic Tectum. <i>Journal of Neuroscience</i> , 1998, 18, 3929-3942.	1.7	158
10	An Anatomical Basis for Visual Calibration of the Auditory Space Map in the Barn Owl's Midbrain. <i>Journal of Neuroscience</i> , 1997, 17, 6820-6837.	1.7	139
11	Why Seeing Is Believing: Merging Auditory and Visual Worlds. <i>Neuron</i> , 2005, 48, 489-496.	3.8	135
12	Control from below: the role of a midbrain network in spatial attention. <i>European Journal of Neuroscience</i> , 2011, 33, 1961-1972.	1.2	127
13	Space-Mapped auditory projections from the inferior colliculus to the optic tectum in the barn owl ( <i>Tyto alba</i> ). <i>Journal of Comparative Neurology</i> , 1983, 218, 187-196.	0.9	125
14	Functional Selection of Adaptive Auditory Space Map by GABAA-Mediated Inhibition. <i>Science</i> , 1999, 284, 962-965.	6.0	124
15	The role of a midbrain network in competitive stimulus selection. <i>Current Opinion in Neurobiology</i> , 2011, 21, 653-660.	2.0	121
16	Neural derivation of sound source location: Resolution of spatial ambiguities in binaural cues. <i>Journal of the Acoustical Society of America</i> , 1992, 91, 1015-1027.	0.5	119
17	Incremental training increases the plasticity of the auditory space map in adult barn owls. <i>Nature</i> , 2002, 419, 293-296.	13.7	119
18	Subdivisions of the inferior colliculus in the barn owl ( <i>Tyto alba</i> ). <i>Journal of Comparative Neurology</i> , 1983, 218, 174-186.	0.9	118

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19	Adaptive Axonal Remodeling in the Midbrain Auditory Space Map. <i>Journal of Neuroscience</i> , 2001, 21, 3161-3174.	1.7	114
20	Experience-Dependent Plasticity and the Maturation of Glutamatergic Synapses. <i>Neuron</i> , 1998, 20, 1067-1071.	3.8	107
21	The optic tectum controls visually guided adaptive plasticity in the owl's auditory space map. <i>Nature</i> , 2002, 415, 73-76.	13.7	104
22	Maps versus clusters: different representations of auditory space in the midbrain and forebrain. <i>Trends in Neurosciences</i> , 1999, 22, 128-135.	4.2	100
23	Top-down gain control of the auditory space map by gaze control circuitry in the barn owl. <i>Nature</i> , 2006, 439, 336-339.	13.7	97
24	A shared inhibitory circuit for both exogenous and endogenous control of stimulus selection. <i>Nature Neuroscience</i> , 2013, 16, 473-478.	7.1	97
25	Global Inhibition and Stimulus Competition in the Owl Optic Tectum. <i>Journal of Neuroscience</i> , 2010, 30, 1727-1738.	1.7	91
26	Anatomical traces of juvenile learning in the auditory system of adult barn owls. <i>Nature Neuroscience</i> , 2005, 8, 93-98.	7.1	84
27	Neural Circuits That Mediate Selective Attention: A Comparative Perspective. <i>Trends in Neurosciences</i> , 2018, 41, 789-805.	4.2	79
28	Signaling of the Strongest Stimulus in the Owl Optic Tectum. <i>Journal of Neuroscience</i> , 2011, 31, 5186-5196.	1.7	74
29	Reciprocal Inhibition of Inhibition: A Circuit Motif for Flexible Categorization in Stimulus Selection. <i>Neuron</i> , 2012, 73, 193-205.	3.8	69
30	Disruption of auditory spatial working memory by inactivation of the forebrain archistriatum in barn owls. <i>Nature</i> , 1996, 383, 428-431.	13.7	65
31	A Site of Auditory Experience-Dependent Plasticity in the Neural Representation of Auditory Space in the Barn Owl's Inferior Colliculus. <i>Journal of Neuroscience</i> , 2000, 20, 3469-3486.	1.7	62
32	Stimulus-driven competition in a cholinergic midbrain nucleus. <i>Nature Neuroscience</i> , 2010, 13, 889-895.	7.1	62
33	A Topographic Instructive Signal Guides the Adjustment of the Auditory Space Map in the Optic Tectum. <i>Journal of Neuroscience</i> , 2001, 21, 8586-8593.	1.7	61
34	Topographic projection from the optic tectum to the auditory space map in the inferior colliculus of the barn owl. , 2000, 421, 146-160.		58
35	Abnormal Auditory Experience Induces Frequency-Specific Adjustments in Unit Tuning for Binaural Localization Cues in the Optic Tectum of Juvenile Owls. <i>Journal of Neuroscience</i> , 2000, 20, 862-877.	1.7	56
36	Top-Down Control of Multimodal Sensitivity in the Barn Owl Optic Tectum. <i>Journal of Neuroscience</i> , 2007, 27, 13279-13291.	1.7	56

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37	Anatomical pathways from the optic tectum to the spinal cord subserving orienting movements in the barn owl. <i>Experimental Brain Research</i> , 1992, 92, 194-208.	0.7	54
38	Does the Superior Colliculus Control Perceptual Sensitivity or Choice Bias during Attention? Evidence from a Multialternative Decision Framework. <i>Journal of Neuroscience</i> , 2017, 37, 480-511.	1.7	49
39	Distinct Mechanisms for Top-Down Control of Neural Gain and Sensitivity in the Owl Optic Tectum. <i>Neuron</i> , 2008, 60, 698-708.	3.8	48
40	Gamma Oscillations Are Generated Locally in an Attention-Related Midbrain Network. <i>Neuron</i> , 2012, 73, 567-580.	3.8	46
41	Early auditory experience modifies sound localization in barn owls. <i>Nature</i> , 1982, 295, 238-240.	13.7	42
42	Early monaural occlusion alters the neural map of interaural level differences in the inferior colliculus of the barn owl. <i>Brain Research</i> , 1993, 619, 29-38.	1.1	42
43	GABAergic Inhibition Antagonizes Adaptive Adjustment of the Owl's Auditory Space Map during the Initial Phase of Plasticity. <i>Journal of Neuroscience</i> , 2001, 21, 4356-4365.	1.7	42
44	Pharmacological Specialization of Learned Auditory Responses in the Inferior Colliculus of the Barn Owl. <i>Journal of Neuroscience</i> , 1998, 18, 3073-3087.	1.7	39
45	Descending Control of Neural Bias and Selectivity in a Spatial Attention Network: Rules and Mechanisms. <i>Neuron</i> , 2014, 84, 214-226.	3.8	38
46	Auditory and Visual Space Maps in the Cholinergic Nucleus Isthmi Pars Parvocellularis of the Barn Owl. <i>Journal of Neuroscience</i> , 2006, 26, 12799-12806.	1.7	37
47	Flexible Categorization of Relative Stimulus Strength by the Optic Tectum. <i>Journal of Neuroscience</i> , 2011, 31, 7745-7752.	1.7	37
48	Space coding by gamma oscillations in the barn owl optic tectum. <i>Journal of Neurophysiology</i> , 2011, 105, 2005-2017.	0.9	37
49	Multiple Sites of Adaptive Plasticity in the Owl's Auditory Localization Pathway. <i>Journal of Neuroscience</i> , 2004, 24, 6853-6861.	1.7	36
50	Evolution of neural processing for visual perception in vertebrates. <i>Journal of Comparative Neurology</i> , 2020, 528, 2888-2901.	0.9	36
51	Selective attention in birds. <i>Current Biology</i> , 2014, 24, R510-R513.	1.8	32
52	Visual Modulation of Auditory Responses in the Owl Inferior Colliculus. <i>Journal of Neurophysiology</i> , 2009, 101, 2924-2933.	0.9	29
53	Magnetic tracking of eye position in freely behaving chickens. <i>Frontiers in Systems Neuroscience</i> , 2013, 7, 91.	1.2	29
54	Distinguishing bias from sensitivity effects in multialternative detection tasks. <i>Journal of Vision</i> , 2014, 14, 16-16.	0.1	29

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55	Visuospatial selective attention in chickens. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E2056-65.	3.3	29
56	Spatially Reciprocal Inhibition of Inhibition within a Stimulus Selection Network in the Avian Midbrain. PLoS ONE, 2014, 9, e85865.	1.1	27
57	Rules of Competitive Stimulus Selection in a Cholinergic Isthmic Nucleus of the Owl Midbrain. Journal of Neuroscience, 2011, 31, 6088-6097.	1.7	26
58	Fused Binocular Vision is Required for Development of Proper Eye Alignment in Barn Owls. Visual Neuroscience, 1989, 2, 35-40.	0.5	25
59	Early Auditory Experience Induces Frequency-Specific, Adaptive Plasticity in the Forebrain Gaze Fields of the Barn Owl. Journal of Neurophysiology, 2001, 85, 2184-2194.	0.9	25
60	Contribution of the forebrain archistriatal gaze fields to auditory orienting behavior in the barn owl. Experimental Brain Research, 1996, 108, 23-32.	0.7	24
61	Representation of Binaural Spatial Cues in Field L of the Barn Owl Forebrain. Journal of Neurophysiology, 1998, 79, 879-890.	0.9	23
62	Selective disinhibition: A unified neural mechanism for predictive and post hoc attentional selection. Vision Research, 2015, 116, 194-209.	0.7	23
63	Early Visual Experience Shapes the Representation of Auditory Space in the Forebrain Gaze Fields of the Barn Owl. Journal of Neuroscience, 1999, 19, 2326-2336.	1.7	19
64	Gamma oscillations in the midbrain spatial attention network: linking circuits to function. Current Opinion in Neurobiology, 2015, 31, 189-198.	2.0	19
65	Spatially precise visual gain control mediated by a cholinergic circuit in the midbrain attention network. Nature Communications, 2016, 7, 13472.	5.8	19
66	A Hebbian Learning Rule Mediates Asymmetric Plasticity in Aligning Sensory Representations. Journal of Neurophysiology, 2008, 100, 1067-1079.	0.9	14
67	Parallel Midbrain Microcircuits Perform Independent Temporal Transformations. Journal of Neuroscience, 2014, 34, 8130-8138.	1.7	12
68	A Dominance Hierarchy of Auditory Spatial Cues in Barn Owls. PLoS ONE, 2010, 5, e10396.	1.1	10
69	Space-Specific Deficits in Visual Orientation Discrimination Caused by Lesions in the Midbrain Stimulus Selection Network. Current Biology, 2017, 27, 2053-2064.e5.	1.8	10
70	Cholinergic Control of Gamma Power in the Midbrain Spatial Attention Network. Journal of Neuroscience, 2015, 35, 761-775.	1.7	8
71	Spatial Probability Dynamically Modulates Visual Target Detection in Chickens. PLoS ONE, 2013, 8, e64136.	1.1	6
72	Early Experience and Sensitive Periods. , 2013, , 479-495.		4

#	ARTICLE	IF	CITATIONS
73	Midbrain and Forebrain Systems for Bottom-up Control of Spatial Attention. , 2012, , 131-150.		4
74	Topographic projection from the optic tectum to the auditory space map in the inferior colliculus of the barn owl. , 2000, 421, 146.		2