Hermann Wagner

List of Publications by Year
in descending order

136 papers	5,271 citations	117625 34 h-index	98798 67 g-index
138 all docs	138 docs citations	138 times ranked	3149 citing authors

#	Article	IF	Citations
1	Optocollic responses in adult barn owls (Tyto furcata). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2022, 208, 239-251.	1.6	4
2	Integrity of and damage to wings, feather vanes and serrations in barn owls. Zoology, 2021, 147, 125930.	1.2	2
3	Flow turning effect and laminar control by the 3D curvature of leading edge serrations from owl wing. Bioinspiration and Biomimetics, 2021, 16, 026010.	2.9	8
4	Embryonic development of the Little Owl (Athene noctua) and Tengmalmâ€™s Owl (Aegolius funereus) compared to the American Barn Owl (Tyto furcata): reference data for staging. Journal of Ornithology, 2020, 161, 267-273.	1.1	4
5	Expression patterns of chloride transporters in the auditory brainstem of developing chicken. Hearing Research, 2020, 393, 108013.	2.0	1
6	A cortex-like canonical circuit in the avian forebrain. Science, 2020, 369, .	12.6	133
7	Ear asymmetry in Tengmalmâ€™s owl (Aegolius funereus): Two phases of asymmetrical development of the squamoso-occipital wing. Zoology, 2020, 141, 125814.	1.2	1
8	Sound localization in barn owls studied with manipulated head-related transfer functions: beyond broadband interaural time and level differences. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2020, 206, 477-498.	1.6	3
9	A brain for numbers. The biology of the number instinct.. Neuroforum, 2020, 26, 121-121.	0.3	0
10	Personal View: The barn owl â€" a specialist for studying sensory systems. Neuroforum, 2019, 25, 213-219.	0.3	2
11	EvoDevo in owl ear asymmetryâ€"The little owl (Athene noctua). Zoology, 2019, 132, 1-5.	1.2	3
12	Kocuria tytonicola, new bacteria from the preen glands of American barn owls (Tyto furcata). Systematic and Applied Microbiology, 2019, 42, 198-204.	2.8	10
13	Kocuria tytonis sp. nov., isolated from the uropygial gland of an American barn owl (Tyto furcata). International Journal of Systematic and Evolutionary Microbiology, 2019, 69, 447-451.	1.7	21
14	Size discrimination in barn owls as compared to humans. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2018, 204, 305-318.	1.6	2
15	Development of ear asymmetry in the American barn owl (Tyto furcata pratincola). Zoology, 2018, 126, 82-88.	1.2	10
16	Visual search in barn owls: Task difficulty and saccadic behavior. Journal of Vision, 2018, 18, 4.	0.3	28
17	Behavioral Evidence and Neural Correlates of Perceptual Grouping by Motion in the Barn Owl. Journal of Neuroscience, 2018, 38, 6653-6664.	3.6	12
18	Response adaptation in the barn owlâ€™s auditory space map. Journal of Neurophysiology, 2018, 119, 1235-1247.	1.8	7

#	Article	IF	Citations
19	Contribution of action potentials to the extracellular field potential in the nucleus laminaris of barn owl. Journal of Neurophysiology, 2018, 119, 1422-1436.	1.8	13
20	Distribution of the characteristics of barbs and barbules on barn owl wing feathers. Journal of Anatomy, 2017, 230, 734-742.	1.5	8
21	Barn owls maximize head rotations by a combination of yawing and rolling in functionally diverse regions of the neck. Journal of Anatomy, 2017, 231, 12-22.	1.5	25
22	From biokinematics to a robotic active vision system. Bioinspiration and Biomimetics, 2017, 12, 056004.	2.9	7
23	Features of owl wings that promote silent flight. Interface Focus, 2017, 7, 20160078.	3.0	81
24	Envelope contributions to the representation of interaural time difference in the forebrain of barn owls. Journal of Neurophysiology, 2017, 118, 1871-1887.	1.8	1
25	Cholinergic top-down influences on the auditory brainstem. E-Neuroforum, 2017, 23, .	0.1	2
26	Combination of Interaural Level and Time Difference in Azimuthal Sound Localization in Owls. ENeuro, 2017, 4, ENEURO.0238-17.2017.	1.9	11
27	Dipolar extracellular potentials generated by axonal projections. ELife, 2017, 6, .	6.0	23
28	Responses to Pop-Out Stimuli in the Barn Owl's Optic Tectum Can Emerge through Stimulus-Specific Adaptation. Journal of Neuroscience, 2016, 36, 4876-4887.	3.6	8
29	Low frequency eardrum directionality in the barn owl induced by sound transmission through the interaural canal. Biological Cybernetics, 2016, 110, 333-343.	1.3	21
30	The Role of Conduction Delay in Creating Sensitivity to Interaural Time Differences. Advances in Experimental Medicine and Biology, 2016, 894, 189-196.	1.6	3
31	Silent Owl Wings. , 2016, , 3659-3669.		1
32	Morphological Variations of Leading-Edge Serrations in Owls (Strigiformes). PLoS ONE, 2016, 11, e0149236.	2.5	26
33	Visual pop-out in barn owls: Human-like behavior in the avian brain. Journal of Vision, 2015, 15, 4.	0.3	17
34	Inhibitory properties underlying non-monotonic input-output relationship in low-frequency spherical bushy neurons of the gerbil. Frontiers in Neural Circuits, 2015, 9, 14.	2.8	18
35	Visual-auditory integration for visual search: a behavioral study in barn owls. Frontiers in Integrative Neuroscience, 2015, 9, 11.	2.1	13
36	Maps of interaural delay in the owl's nucleus laminaris. Journal of Neurophysiology, 2015, 114, 1862-1873.	1.8	22

#	Article	IF	Citations
37	Estimating characteristic phase and delay from broadband interaural time difference tuning curves. Journal of Computational Neuroscience, 2015, 38, 143-166.	1.0	0
38	Muscular Arrangement and Muscle Attachment Sites in the Cervical Region of the American Barn Owl (Tyto furcata pratincola). PLoS ONE, 2015, 10, e0134272.	2.5	11
39	The Cervical Spine of the American Barn Owl (Tyto furcata pratincola): I. Anatomy of the Vertebrae and Regionalization in Their S-Shaped Arrangement. PLoS ONE, 2014, 9, e91653.	2.5	38
40	Influence of double stimulation on sound-localization behavior in barn owls. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2014, 200, 1033-1044.	1.6	6
41	A functional circuit model of interaural time difference processing. Journal of Neurophysiology, 2014, 112, 2850-2864.	1.8	15
42	Side peak suppression in responses of an across-frequency integration model to stimuli of varying bandwidth as demonstrated analytically and by implementation. Journal of Computational Neuroscience, 2014, 36, 1-17.	1.0	2
43	Detecting interaural time differences and remodeling their representation. Trends in Neurosciences, 2014, 37, 289-300.	8.6	38
44	Maps of ITD in the Nucleus Laminaris of the Barn Owl. Advances in Experimental Medicine and Biology, 2013, 787, 215-222.	1.6	11
45	Evolutionary Conservation of Kv3.1 in the Barn OwlTyto alba. Brain, Behavior and Evolution, 2013, 81, 187-193.	1.7	1
46	Neuroethology of prey capture in the barn owl (Tyto alba L.). Journal of Physiology (Paris), 2013, 107, 51-61.	2.1	32
47	Linear summation in the barn owl's brainstem underlies responses to interaural time differences. Journal of Neurophysiology, 2013, 110, 117-130.	1.8	19
48	Night vision in barn owls: Visual acuity and contrast sensitivity under dark adaptation. Journal of Vision, 2012, 12, 4-4.	0.3	42
49	Transformation from a Pure Time Delay to a Mixed Time and Phase Delay Representation in the Auditory Forebrain Pathway. Journal of Neuroscience, 2012, 32, 5911-5923.	3.6	23
50	Flexural stiffness of feather shafts: geometry rules over material properties. Journal of Experimental Biology, 2012, 215, 405-415.	1.7	80
51	Inner vane fringes of barn owl feathers reconsidered: morphometric data and functional aspects. Journal of Anatomy, 2012, 221, 1-8.	1.5	29
52	The representation of sound localization cues in the barn owl's inferior colliculus. Frontiers in Neural Circuits, 2012, 6, 45.	2.8	21
53	Adaptation in the auditory midbrain of the barn owl (Tyto alba) induced by tonal double stimulation. European Journal of Neuroscience, 2012, 35, 445-456.	2.6	14
54	Maternal corticosterone is transferred into the egg yolk. General and Comparative Endocrinology, 2012, 178, 139-144.	1.8	55

#	Article	IF	Citations
55	Responses of Tectal Neurons to Contrasting Stimuli: An Electrophysiological Study in the Barn Owl. PLoS ONE, 2012, 7, e39559.	2.5	16
56	Disparity sensitivity in man and owl: Psychophysical evidence for equivalent perception of shape-from-stereo. Journal of Vision, 2011, 10, 10-10.	0.3	32
57	The three-dimensional shape of serrations at barn owl wings: towards a typical natural serration as a role model for biomimetic applications. Journal of Anatomy, 2011, 219, 192-202.	1.5	60
58	From optics to attention: visual perception in barn owls. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2011, 197, 1031-1042.	1.6	27
59	The barn owl wing: an inspiration for silent flight in the aviation industry?. Proceedings of SPIE, 2011, , .	0.8	10
60	Overt attention toward oriented objects in free-viewing barn owls. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 8461-8466.	7.1	29
61	On the Origin of the Extracellular Field Potential in the Nucleus Laminaris of the Barn Owl (Tyto) Tj ETQq1 1 0.784314 rgBT /Overlo	1.8	37
62	Target-approaching behavior of barn owls (Tyto alba): influence of sound frequency. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2010, 196, 227-240.	1.6	12
63	Properties of low-frequency head-related transfer functions in the barn owl (Tyto alba). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2010, 196, 601-612.	1.6	15
64	Neural correlates of binaural masking level difference in the inferior colliculus of the barn owl (Tyto alba). European Journal of Neuroscience, 2010, 32, 606-618.	2.6	10
65	Estimated Cochlear Delays in Low Best-Frequency Neurons in the Barn Owl Cannot Explain Coding of Interaural Time Difference. Journal of Neurophysiology, 2010, 104, 1946-1954.	1.8	11
66	WHY ARE BARN OWLS A MODEL SYSTEM FOR SOUND LOCALIZATION?. Journal of Experimental Biology, 2010, 213, 2355-2356.	1.7	1
67	Processing of Phase-Locked Spikes and Periodic Signals. , 2010, , 59-74.		17
68	Auditory Responses in the Barn Owl's Nucleus Laminaris to Clicks: Impulse Response and Signal Analysis of Neurophonic Potential. Journal of Neurophysiology, 2009, 102, 1227-1240.	1.8	24
69	Tuning to Interaural Time Difference and Frequency Differs Between the Auditory Arcopallium and the External Nucleus of the Inferior Colliculus. Journal of Neurophysiology, 2009, 101, 2348-2361.	1.8	34
70	Improvements of Sound Localization Abilities by the Facial Ruff of the Barn Owl (Tyto alba) as Demonstrated by Virtual Ruff Removal. PLoS ONE, 2009, 4, e7721.	2.5	51
71	Spatial contrast sensitivity and grating acuity of barn owls. Journal of Vision, 2009, 9, 13-13.	0.3	57
72	Signal-to-noise ratio of the neurophonic potential in the laminar nucleus of the barn owl. BMC Neuroscience, 2009, 10, .	1.9	0

#	Article	IF	Citations
73	Increase of Kv3.1b expression in avian auditory brainstem neurons correlates with synaptogenesis in vivo and in vitro. Brain Research, 2009, 1302, 64-75.	2.2	9
74	Experimental analysis of the flow field over a novel owl based airfoil. Experiments in Fluids, 2009, 46, 975-989.	2.4	62
75	Through a barn owlâ€™s eyes: interactions between scene content and visual attention. Biological Cybernetics, 2008, 98, 115-132.	1.3	32
76	Identification of auditory neurons by retrograde labelling for patch-clamp recordings in a mixed culture of chick brainstem. Journal of Neuroscience Methods, 2008, 169, 55-64.	2.5	4
77	In-flight corrections in free-flying barn owls (Tyto alba)during sound localization tasks. Journal of Experimental Biology, 2008, 211, 2976-2988.	1.7	29
78	Distribution of Interaural Time Difference in the Barn Owl's Inferior Colliculus in the Low- and High-Frequency Ranges. Journal of Neuroscience, 2007, 27, 4191-4200.	3.6	52
79	Azimuthal sound localization using coincidence of timing across frequency on a robotic platform. Journal of the Acoustical Society of America, 2007, 121, 2034-2048.	1.1	22
80	Morphometric characterisation of wing feathers of the barn owl Tyto alba pratincola and the pigeon Columba livia. Frontiers in Zoology, 2007, 4, 23.	2.0	110
81	Neuronal differentiation of the early embryonic auditory hindbrain of the chicken in primary culture. European Journal of Neuroscience, 2007, 25, 974-984.	2.6	9
82	Vernier acuity in barn owls. Vision Research, 2007, 47, 1020-1026.	1.4	17
83	Ocular aberrations in barn owl eyes. Vision Research, 2007, 47, 2934-2942.	1.4	19
84	Sensitivity to interaural time difference and representation of azimuth in central nucleus of inferior colliculus in the barn owl. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2007, 193, 99-112.	1.6	11
85	On the barn owlâ€™s visual pre-attack behavior: I. Structure of head movements and motion patterns. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2006, 192, 927-940.	1.6	36
86	Influence of the facial ruff on the sound-receiving characteristics of the barn owlâ€™s ears. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2006, 192, 1073-1082.	1.6	58
87	Embryonic and posthatching development of the barn owl (Tyto alba): Reference data for age determination. Developmental Dynamics, 2005, 233, 1248-1260.	1.8	37
88	Microsecond Precision of Phase Delay in the Auditory System of the Barn Owl. Journal of Neurophysiology, 2005, 94, 1655-1658.	1.8	43
89	A comparison of neural computations underlying stereo vision and sound localization. Journal of Physiology (Paris), 2004, 98, 135-145.	2.1	9
90	How owls structure visual information. Animal Cognition, 2003, 6, 39-55.	1.8	24

#	Article	IF	Citations
91	Anatomical markers for the subdivisions of the barn owl's inferiorâ€collicular complex and adjacent periâ€and subventricular structures. Journal of Comparative Neurology, 2003, 465, 145-159.	1.6	38
92	Development of output connections from the inferior colliculus to the optic tectum in barn owls. Journal of Comparative Neurology, 2003, 464, 511-524.	1.6	12
93	Depth generalization from stereo to motion parallax in the owl. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2002, 187, 997-1007.	1.6	45
94	Distribution of auditory motion-direction sensitive neurons in the barn owl's midbrain. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2002, 188, 705-713.	1.6	9
95	Visual depth encoding in populations of neurons with localized receptive fields. Biological Cybernetics, 2002, 87, 249-261.	1.3	12
96	Response properties of neurons in the core of the central nucleus of the inferior colliculus of the barn owl. European Journal of Neuroscience, 2002, 15, 1343-1352.	2.6	33
97	Precognitive and cognitive elements in sound localization. Zoology, 2002, 105, 329-339.	1.2	7
98	Morphometry of Auricular Feathers of Barn Owls (Tyto alba). European Journal of Morphology, 2002, 40, 15-21.	0.8	14
99	Spatial Attention Modulates Sound Localization in Barn Owls. Journal of Neurophysiology, 2001, 85, 1009-1012.	1.8	26
100	Hierarchical Processing of Horizontal Disparity Information in the Visual Forebrain of Behaving Owls. Journal of Neuroscience, 2001, 21, 4514-4522.	3.6	50
101	Encoding of both vertical and horizontal disparity in random-dot stereograms by Wulst neurons of awake barn owls. Visual Neuroscience, 2001, 18, 541-547.	1.0	28
102	A threshold explains modulation of neural responses to opposite-contrast stereograms. NeuroReport, 2001, 12, 3205-3208.	1.2	29
103	Sound-localization experiments with barn owls in virtual space: influence of broadband interaural level difference on head-turning behavior. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2001, 187, 225-233.	1.6	36
104	Sound-Localization Experiments with Barn Owls in Virtual Space: Influence of Interaural Time Difference on Head-Turning Behavior. , 2001, 2, 1-21.		51
105	An interaural time difference map resulting from axonal selection through non-specific learning. Neurocomputing, 2001, 38-40, 1401-1407.	5.9	1
106	Formation of temporal-feature maps by axonal propagation of synaptic learning. Proceedings of the National Academy of Sciences of the United States of America, 2001, 98, 4166-4171.	7.1	59
107	Disparity tuning as simulated by a neural net. Biological Cybernetics, 2000, 83, 61-72.	1.3	11
108	A Candidate Pathway for a Visual Instructional Signal to the Barn Owl's Auditory System. Journal of Neuroscience, 2000, 20, RC70-RC70.	3.6	29

#	Article	IF	Citations
109	Horizontal-Disparity Tuning of Neurons in the Visual Forebrain of the Behaving Barn Owl. Journal of Neurophysiology, 2000, 83, 2967-2979.	1.8	52
110	Perception and neuronal coding of subjective contours in the owl. Nature Neuroscience, 1999, 2, 660-663.	14.8	101
111	Development of calretinin immunoreactivity in the brainstem auditory nuclei of the barn owl (Tyto) Tj ETQq1 1 0.784314 rgBT /Overlock		42
112	QUALITY OF COINCIDENCE DETECTION AND ITD TUNING: A THEORETICAL FRAMEWORK. , 1999, , 185-194.		1
113	NEURAL COMPUTATIONS IN BINAURAL HEARING. , 1999, , 169-178.		0
114	>A Highly Rudimentary Circadian Melatonin Profile in a Nocturnal Bird, the Barn Owl (Tyto alba). Die Naturwissenschaften, 1998, 85, 402-404.	1.6	17
115	Extracting Oscillations: Neuronal Coincidence Detection with Noisy Periodic Spike Input. Neural Computation, 1998, 10, 1987-2017.	2.2	92
116	Stereoscopic depth perception in the owl. NeuroReport, 1998, 9, 1233-1237.	1.2	67
117	GABAergic Inhibition Influences Auditory Motion-Direction Sensitivity in Barn Owls. Journal of Neurophysiology, 1998, 80, 172-185.	1.8	21
118	Effect of Ecological Pressures on Brains: Examples from Avian Neuroethology and General Meanings. Zeitschrift Fur Naturforschung - Section C Journal of Biosciences, 1998, 53, 560-581.	1.4	3
119	Principles of acoustic motion detection in animals and man. Trends in Neurosciences, 1997, 20, 583-588.	8.6	22
120	A Developmental Learning Rule for Coincidence Tuning in the Barn Owl Auditory System. , 1997, , 665-669.		3
121	Neural encoding of binocular disparity: Energy models, position shifts and phase shifts. Vision Research, 1996, 36, 1839-1857.	1.4	318
122	A neuronal learning rule for sub-millisecond temporal coding. Nature, 1996, 383, 76-78.	27.8	1,038
123	Disparity-sensitive cells in the owl have a characteristic disparity. Nature, 1993, 364, 796-798.	27.8	61
124	Barn owls have symmetrical accommodation in both eyes, but independent pupillary responses to light. Vision Research, 1992, 32, 1149-1155.	1.4	23
125	On the ability of neurons in the barn owl's inferior colliculus to sense brief appearances of interaural time difference. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1992, 170, 3-11.	1.6	14
126	Barn owls (Tyto alba) use accommodation as a distance cue. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1991, 169, 515.	1.6	19

#	Article	IF	Citations
127	A temporal window for lateralization of interaural time difference by barn owls. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1991, 169, 281-9.	1.6	20
128	Receptive Fields of Neurons in the Owl's Auditory Brainstem Change Dynamically. European Journal of Neuroscience, 1990, 2, 949-959.	2.6	42
129	Neurons in the midbrain of the barn owl are sensitive to the direction of apparent acoustic motion. Die Naturwissenschaften, 1990, 77, 439-442.	1.6	26
130	Role of commissural projections in the representation of bilateral auditory space in the barn owl's inferior colliculus. Journal of Comparative Neurology, 1989, 281, 545-554.	1.6	65
131	Flight performance and visual control of flight of the free-flying housefly (Musca domestica L.) I. Organization of the flight motor. Philosophical Transactions of the Royal Society of London Series B, Biological Sciences, 1986, 312, 527-551.	2.3	96
132	Flight performance and visual control of flight of the free-flying housefly (Musca domestica L.) II. Pursuit of targets. Philosophical Transactions of the Royal Society of London Series B, Biological Sciences, 1986, 312, 553-579.	2.3	203
133	Flight performance and visual control of flight of the free-flying housefly (musca domestical L.) III. Interactions between angular movement induced by wide- and smallfield stimuli. Philosophical Transactions of the Royal Society of London Series B, Biological Sciences, 1986, 312, 581-595.	2.3	61
134	Flow-field variables trigger landing in flies. Nature, 1982, 297, 147-148.	27.8	360
135	Using Virtual Acoustic Space to Investigate Sound Localisation. , 0, , .		0
136	Development of the horizontal optocollic reflex in juvenile barn owls (Tyto furcata pratincola). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 0, , .	1.6	0