# Catherine Emily Carr

List of Publications by Year
in descending order



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|---|---|---|---|
| 61 papers | 2,061 citations | 279798 23 h-index | 254184 43 g-index |
| 70 all docs | 70 docs citations | 70 times ranked | 1205 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | The role of dendrites in auditory coincidence detection. Nature, 1998, 393, 268-272. | 27.8 | 348 |
| 2 | Sound localization: Jeffress and beyond. Current Opinion in Neurobiology, 2011, 21, 745-751. | 4.2 | 131 |
| 3 | On hearing with more than one ear: lessons from evolution. Nature Neuroscience, 2009, 12, 692-697. | 14.8 | 109 |
| 4 | Maps of interaural time difference in the chickenâ€™s brainstem nucleus laminaris. Biological Cybernetics, 2008, 98, 541-559. | 1.3 | 103 |
| 5 | Evolution of a sensory novelty: Tympanic ears and the associated neural processing. Brain Research Bulletin, 2008, 75, 365-370. | 3.0 | 83 |
| 6 | Specialization for underwater hearing by the tympanic middle ear of the turtle,Trachemys scripta elegans. Proceedings of the Royal Society B: Biological Sciences, 2012, 279, 2816-2824. | 2.6 | 62 |
| 7 | Detection of Interaural Time Differences in the Alligator. Journal of Neuroscience, 2009, 29, 7978-7990. | 3.6 | 56 |
| 8 | Binaural processing by the gecko auditory periphery. Journal of Neurophysiology, 2011, 105, 1992-2004. | 1.8 | 51 |
| 9 | The Evolution of Central Pathways and Their Neural Processing Patterns. Springer Handbook of Auditory Research, 2004, , 289-359. | 0.7 | 50 |
| 10 | Low-frequency pathway in the barn owl's auditory brainstem. Journal of Comparative Neurology, 1997, 378, 265-282. | 1.6 | 47 |
| 11 | Biophysics of directional hearing in the American alligator (Alligator mississippiensis). Journal of Experimental Biology, 2014, 217, 1094-1107. | 1.7 | 45 |
| 12 | Modeling coincidence detection in nucleus laminaris. Biological Cybernetics, 2003, 89, 388-396. | 1.3 | 44 |
| 13 | Microsecond Precision of Phase Delay in the Auditory System of the Barn Owl. Journal of Neurophysiology, 2005, 94, 1655-1658. | 1.8 | 43 |
| 14 | Development of calretinin immunoreactivity in the brainstem auditory nuclei of the barn owl (Tyto) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 | | 42 |
| 15 | Interaural timing difference circuits in the auditory brainstem of the emu (Dromaius) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 182 | 1.6 | 41 |
| 16 | Bigger Brains or Bigger Nuclei? Regulating the Size of Auditory Structures in Birds. Brain, Behavior and Evolution, 2004, 63, 169-180. | 1.7 | 40 |
| 17 | The cytoarchitecture of the nucleus angularis of the barn owl (Tyto alba). Journal of Comparative Neurology, 2001, 429, 192-205. | 1.6 | 39 |
| 18 | On the Origin of the Extracellular Field Potential in the Nucleus Laminaris of the Barn Owl (Tyto) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 | 1.8 | 37 |

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|---|---|---|---|
| 19 | Middle Ear Cavity Morphology Is Consistent with an Aquatic Origin for Testudines. PLoS ONE, 2013, 8, e54086. | 2.5 | 34 |
| 20 | Beyond timing in the auditory brainstem: intensity coding in the avian cochlear nucleus angularis. Progress in Brain Research, 2007, 165, 123-133. | 1.4 | 33 |
| 21 | Localization of KCNC1 (Kv3.1) potassium channel subunits in the avian auditory nucleus magnocellularis and nucleus laminaris during development. Journal of Neurobiology, 2003, 55, 165-178. | 3.6 | 30 |
| 22 | Functional delay of myelination of auditory delay lines in the nucleus laminaris of the barn owl. Developmental Neurobiology, 2007, 67, 1957-1974. | 3.0 | 29 |
| 23 | Calciumâ€binding protein immunoreactivity characterizes the auditory system of Gekko gecko. Journal of Comparative Neurology, 2010, 518, 3409-3426. | 1.6 | 29 |
| 24 | Sound Localization Strategies in Three Predators. Brain, Behavior and Evolution, 2015, 86, 17-27. | 1.7 | 27 |
| 25 | Evolutionary trends in directional hearing. Current Opinion in Neurobiology, 2016, 40, 111-117. | 4.2 | 27 |
| 26 | Sound localization in the alligator. Hearing Research, 2015, 329, 11-20. | 2.0 | 25 |
| 27 | 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 |
| 28 | Animals and ICE: meaning, origin, and diversity. Biological Cybernetics, 2016, 110, 237-246. | 1.3 | 24 |
| 29 | Coding interaural time differences at low best frequencies in the barn owl. Journal of Physiology (Paris), 2004, 98, 99-112. | 2.1 | 23 |
| 30 | Microseconds Matter. PLoS Biology, 2010, 8, e1000405. | 5.6 | 23 |
| 31 | Dipolar extracellular potentials generated by axonal projections. ELife, 2017, 6, . | 6.0 | 23 |
| 32 | A dendritic model of coincidence detection in the avian brainstem. Neurocomputing, 1999, 26-27, 263-269. | 5.9 | 22 |
| 33 | Maps of interaural delay in the owl's nucleus laminaris. Journal of Neurophysiology, 2015, 114, 1862-1873. | 1.8 | 22 |
| 34 | Development of AMPA-selective glutamate receptors in the auditory brainstem of the barn owl. , 1998, 41, 176-186. | | 20 |
| 35 | Timing is everything: Organization of timing circuits in auditory and electrical sensory systems. Journal of Comparative Neurology, 2004, 472, 131-133. | 1.6 | 20 |
| 36 | Organization of the auditory brainstem in a lizard, Gekko gecko. I. Auditory nerve, cochlear nuclei, and superior olivary nuclei. Journal of Comparative Neurology, 2012, 520, 1784-1799. | 1.6 | 20 |

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|---|---|---|---|
| 37 | Theoretical foundations of the sound analog membrane potential that underlies coincidence detection in the barn owl. Frontiers in Computational Neuroscience, 2013, 7, 151. | 2.1 | 20 |
| 38 | Linear summation in the barn owl's brainstem underlies responses to interaural time differences. Journal of Neurophysiology, 2013, 110, 117-130. | 1.8 | 19 |
| 39 | Coupled ears in lizards and crocodilians. Biological Cybernetics, 2016, 110, 291-302. | 1.3 | 19 |
| 40 | Evolution of Sound Source Localization Circuits in the Nonmammalian Vertebrate Brainstem. Brain, Behavior and Evolution, 2017, 90, 131-153. | 1.7 | 19 |
| 41 | Development of auditory sensitivity in the barn owl. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2017, 203, 843-853. | 1.6 | 18 |
| 42 | In-air hearing of a diving duck: A comparison of psychoacoustic and auditory brainstem response thresholds. Journal of the Acoustical Society of America, 2016, 139, 3001-3008. | 1.1 | 17 |
| 43 | Development of N-methyl-D-aspartate receptor subunits in avian auditory brainstem. Journal of Comparative Neurology, 2007, 502, 400-413. | 1.6 | 16 |
| 44 | Biophysical basis of the sound analog membrane potential that underlies coincidence detection in the barn owl. Frontiers in Computational Neuroscience, 2013, 7, 102. | 2.1 | 16 |
| 45 | 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 |
| 46 | Bony labyrinth morphometry reveals hidden diversity in lungless salamanders (Family) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 387 Td (Plet<br>Evolution; International Journal of Organic Evolution, 2019, 73, 2135-2150. | 2.3 | 10 |
| 47 | Neural Maps of Interaural Time Difference in the American Alligator: A Stable Feature in Modern Archosaurs. Journal of Neuroscience, 2019, 39, 3882-3896. | 3.6 | 10 |
| 48 | Hearing without a tympanic ear. Journal of Experimental Biology, 2022, 225, . | 1.7 | 10 |
| 49 | Synaptic Mechanisms of Coincidence Detection. Springer Handbook of Auditory Research, 2012, , 135-164. | 0.7 | 7 |
| 50 | Cracking an improbable sensory map. Journal of Experimental Biology, 2016, 219, 3829-3831. | 1.7 | 6 |
| 51 | Seismic sensitivity and bone conduction mechanisms enable extratympanic hearing in salamanders. Journal of Experimental Biology, 2020, 223, . | 1.7 | 6 |
| 52 | Signal-to-noise ratio in the membrane potential of the owl's auditory coincidence detectors. Journal of Neurophysiology, 2012, 108, 2837-2845. | 1.8 | 5 |
| 53 | A circuit for detection of interaural time differences in the nucleus laminaris of turtles. Journal of Experimental Biology, 2017, 220, 4270-4281. | 1.7 | 5 |
| 54 | Auditory Brainstem Response Wave III is Correlated with Extracellular Field Potentials from Nucleus Laminaris of the Barn Owl. Acta Acustica United With Acustica, 2018, 104, 874-877. | 0.8 | 5 |

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|---|---|---|---|
| 55 | Bone conduction pathways confer directional cues to salamanders. Journal of Experimental Biology, 2021, 224, . | 1.7 | 4 |
| 56 | Evolution of Central Pathways. , 2020, , 354-376. | | 3 |
| 57 | Strongly directional responses to tones and conspecific calls in the auditory nerve of the Tokay gecko, Gekko gecko. Journal of Neurophysiology, 2021, 125, 887-902. | 1.8 | 2 |
| 58 | Theoretical Relationship Between Two Measures of Spike Synchrony: Correlation Index and Vector Strength. Frontiers in Neuroscience, 2021, 15, 761826. | 2.8 | 2 |
| 59 | Dynamics of synaptic extracellular field potentials in the nucleus laminaris of the barn owl. Journal of Neurophysiology, 2019, 121, 1034-1047. | 1.8 | 1 |
| 60 | Zebrin Expression in the Cerebellum of Two Crocodilian Species. Brain, Behavior and Evolution, 2020, 95, 45-55. | 1.7 | 1 |
| 61 | Calcium-binding protein immunoreactivity characterizes the auditory system of Gekko gecko. Journal of Comparative Neurology, 2010, 518, spc1-spc1. | 1.6 | 0 |