# Laurel H Carney

List of Publications by Year
in descending order



| 107 | 5,037 | 134610<br>34 | 111975<br>67 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 123 | 123 | 123 | 1981 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | A comparative study of eight human auditory models of monaural processing. Acta Acustica, 2022, 6, 17. | 0.4 | 21 |
| 2 | Predicting speech intelligibility in hearing-impaired listeners using a physiologically inspired auditory model. Hearing Research, 2022, 426, 108553. | 0.9 | 14 |
| 3 | Neural processing and perception of Schroederâ€phase harmonic tone complexes in the gerbil: Relating singleâ€unit neurophysiology to behavior. European Journal of Neuroscience, 2022, 56, 4060-4085. | 1.2 | 5 |
| 4 | Speeding up machine hearing. Nature Machine Intelligence, 2021, 3, 190-191. | 8.3 | 2 |
| 5 | A Closed-Loop Gain-Control Feedback Model for The Medial Efferent System of The Descending Auditory Pathway. , 2021, , . |  | 8 |
| 6 | Midbrain-Level Neural Correlates of Behavioral Tone-in-Noise Detection: Dependence on Energy and Envelope Cues. Journal of Neuroscience, 2021, 41, 7206-7223. | 1.7 | 11 |
| 7 | Responses to diotic tone-in-noise stimuli in the inferior colliculus: stimulus envelope and neural fluctuation cues. Hearing Research, 2021, 409, 108328. | 0.9 | 5 |
| 8 | Amplitude modulation transfer functions reveal opposing populations within both the inferior colliculus and medial geniculate body. Journal of Neurophysiology, 2020, 124, 1198-1215. | 0.9 | 33 |
| 9 | Identifying cues for tone-in-noise detection using decision variable correlation in the budgerigar (Melopsittacus undulatus). Journal of the Acoustical Society of America, 2020, 147, 984-997. | 0.5 | 9 |
| 10 | Sensorineural Hearing Loss Diminishes Use of Temporal Envelope Cues: Evidence From Roving-Level Tone-in-Noise Detection. Ear and Hearing, 2020, 41, 1009-1019. | 1.0 | 12 |
| 11 | Neural fluctuation cues for simultaneous notched-noise masking and profile-analysis tasks: Insights from model midbrain responses. Journal of the Acoustical Society of America, 2020, 147, 3523-3537. | 0.5 | 18 |
| 12 | A canonical oscillator model of cochlear dynamics. Hearing Research, 2019, 380, 100-107. | 0.9 | 11 |
| 13 | Potential cues for the â€œlevel discriminationâ€• of a noise band in the presence of flanking bands. Journal of the Acoustical Society of America, 2019, 145, EL442-EL448. | 0.5 | 3 |
| 14 | Nonlinear auditory models yield new insights into representations of vowels. Attention, Perception, and Psychophysics, 2019, 81, 1034-1046. | 0.7 | 18 |
| 15 | Effects of Musical Training and Hearing Loss on Fundamental Frequency Discrimination and Temporal Fine Structure Processing: Psychophysics and Modeling. JARO - Journal of the Association for Research in Otolaryngology, 2019, 20, 263-277. | 0.9 | 23 |
| 16 | Special issue on computational models of hearing. Hearing Research, 2018, 360, 1-2. | 0.9 | 0 |
| 17 | Challenging One Model With Many Stimuli: Simulating Responses in the Inferior Colliculus. Acta Acustica United With Acustica, 2018, 104, 895-899. | 0.8 | 3 |
| 18 | Predicting Speech Intelligibility Based on Across-Frequency Contrast in Simulated Auditory-Nerve Fluctuations. Acta Acustica United With Acustica, 2018, 104, 914-917. | 0.8 | 12 |

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|---|---|---|---|
| 19 | Convergence of linear acceleration and yaw rotation signals on non-eye movement neurons in the vestibular nucleus of macaques. Journal of Neurophysiology, 2018, 119, 73-83. | 0.9 | 6 |
| 20 | Preferred Tempo and Low-Audio-Frequency Bias Emerge From Simulated Sub-cortical Processing of Sounds With a Musical Beat. Frontiers in Neuroscience, 2018, 12, 349. | 1.4 | 14 |
| 21 | Supra-Threshold Hearing and Fluctuation Profiles: Implications for Sensorineural and Hidden Hearing Loss. JARO - Journal of the Association for Research in Otolaryngology, 2018, 19, 331-352. | 0.9 | 113 |
| 22 | Formant-frequency discrimination of synthesized vowels in budgerigars (Melopsittacus undulatus) and humans. Journal of the Acoustical Society of America, 2017, 142, 2073-2083. | 0.5 | 13 |
| 23 | Midbrain Synchrony to Envelope Structure Supports Behavioral Sensitivity to Single-Formant Vowel-Like Sounds in Noise. JARO - Journal of the Association for Research in Otolaryngology, 2017, 18, 165-181. | 0.9 | 28 |
| 24 | Modeling Responses in the Superior Paraolivary Nucleus: Implications for Forward Masking in the Inferior Colliculus. JARO - Journal of the Association for Research in Otolaryngology, 2017, 18, 441-456. | 0.9 | 10 |
| 25 | Neural correlates of behavioral amplitude modulation sensitivity in the budgerigar midbrain. Journal of Neurophysiology, 2016, 115, 1905-1916. | 0.9 | 24 |
| 26 | Speech Coding in the Midbrain: Effects of Sensorineural Hearing Loss. Advances in Experimental Medicine and Biology, 2016, 894, 427-435. | 0.8 | 11 |
| 27 | Speech Coding in the Brain: Representation of Vowel Formants by Midbrain Neurons Tuned to Sound Fluctuations. ENeuro, 2015, 2, ENEURO.0004-15.2015. | 0.9 | 73 |
| 28 | Near-Field Discrimination of Sound Source Distance in the Rabbit. JARO - Journal of the Association for Research in Otolaryngology, 2015, 16, 255-262. | 0.9 | 6 |
| 29 | Cues for Diotic and Dichotic Detection of a 500-Hz Tone in Noise Vary with Hearing Loss. JARO - Journal of the Association for Research in Otolaryngology, 2015, 16, 507-521. | 0.9 | 12 |
| 30 | Auditory Distance Coding in Rabbit Midbrain Neurons and Human Perception: Monaural Amplitude Modulation Depth as a Cue. Journal of Neuroscience, 2015, 35, 5360-5372. | 1.7 | 29 |
| 31 | Tone-in-Noise Detection Using Envelope Cues: Comparison of Signal-Processing-Based and Physiological Models. JARO - Journal of the Association for Research in Otolaryngology, 2015, 16, 121-133. | 0.9 | 19 |
| 32 | Updated parameters and expanded simulation options for a model of the auditory periphery. Journal of the Acoustical Society of America, 2014, 135, 283-286. | 0.5 | 255 |
| 33 | Binaural detection with narrowband and wideband reproducible noise maskers. IV. Models using interaural time, level, and envelope differences. Journal of the Acoustical Society of America, 2014, 135, 824-837. | 0.5 | 11 |
| 34 | Suboptimal Use of Neural Information in a Mammalian Auditory System. Journal of Neuroscience, 2014, 34, 1306-1313. | 1.7 | 22 |
| 35 | Speech Enhancement for Listeners With Hearing Loss Based on a Model for Vowel Coding in the Auditory Midbrain. IEEE Transactions on Biomedical Engineering, 2014, 61, 2081-2091. | 2.5 | 8 |
| 36 | Detection Thresholds for Amplitude Modulations of Tones in Budgerigar, Rabbit, and Human. Advances in Experimental Medicine and Biology, 2013, 787, 391-398. | 0.8 | 16 |

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|---|---|---|---|
| 37 | Development of a scale for estimating procedural distress in the newborn intensive care unit: The Procedural Load Index. Early Human Development, 2013, 89, 615-619. | 0.8 | 4 |
| 38 | Predictions of diotic tone-in-noise detection based on a nonlinear optimal combination of energy, envelope, and fine-structure cues. Journal of the Acoustical Society of America, 2013, 134, 396-406. | 0.5 | 26 |
| 39 | Modeling detection of 500-Hertz tones in reproducible noise for listeners with sensorineural hearing loss. Proceedings of Meetings on Acoustics, 2013, , . | 0.3 | 0 |
| 40 | Comparative auditory biomechanics probed by otoacoustic emissions. Proceedings of Meetings on Acoustics, 2013, , . | 0.3 | 0 |
| 41 | Using a computational model for the auditory midbrain to explore the neural representation of vowels. Proceedings of Meetings on Acoustics, 2013, , . | 0.3 | 0 |
| 42 | Amplitude modulation detection patterns of the Budgerigar. , 2012, , . | | 0 |
| 43 | Predicting discrimination of formant frequencies in vowels with a computational model of the auditory midbrain. , 2012, , . | | 0 |
| 44 | Semi-supervised spike sorting using pattern matching and a scaled Mahalanobis distance metric. Journal of Neuroscience Methods, 2012, 206, 120-131. | 1.3 | 18 |
| 45 | Sound-localization ability of the Mongolian gerbil (Meriones unguiculatus) in a task with a simplified response map. Hearing Research, 2011, 275, 89-95. | 0.9 | 9 |
| 46 | Forward Masking in the Amplitude-Modulation Domain for Tone Carriers: Psychophysical Results and Physiological Correlates. JARO - Journal of the Association for Research in Otolaryngology, 2011, 12, 361-373. | 0.9 | 24 |
| 47 | Power-Law Dynamics in an Auditory-Nerve Model Can Account for Neural Adaptation to Sound-Level Statistics. Journal of Neuroscience, 2010, 30, 10380-10390. | 1.7 | 58 |
| 48 | An evaluation of models for diotic and dichotic detection in reproducible noises. Journal of the Acoustical Society of America, 2009, 126, 1906-1925. | 0.5 | 23 |
| 49 | A phenomenological model of the synapse between the inner hair cell and auditory nerve: Long-term adaptation with power-law dynamics. Journal of the Acoustical Society of America, 2009, 126, 2390-2412. | 0.5 | 291 |
| 50 | Diotic and dichotic detection with reproducible chimeric stimuli. Journal of the Acoustical Society of America, 2009, 126, 1889. | 0.5 | 14 |
| 51 | Statistical Analyses of Temporal Information in Auditory Brainstem Responses to Tones in Noise: Correlation Index and Spike-distance Metric. JARO - Journal of the Association for Research in Otolaryngology, 2008, 9, 373-387. | 0.9 | 9 |
| 52 | Comparison of slow and fast neocortical neuron migration using a new in vitromodel. BMC Neuroscience, 2008, 9, 50. | 0.8 | 16 |
| 53 | Influence of Inhibitory Inputs on Rate and Timing of Responses in the Anteroventral Cochlear Nucleus. Journal of Neurophysiology, 2008, 99, 1077-1095. | 0.9 | 50 |
| 54 | Comparison of level discrimination, increment detection, and comodulation masking release in the audio- and envelope-frequency domains. Journal of the Acoustical Society of America, 2007, 121, 2168-2181. | 0.5 | 1 |

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|---|---|---|---|
| 55 | Speech enhancement using the modified phase-opponency model. Journal of the Acoustical Society of America, 2007, 121, 3886. | 0.5 | 13 |
| 56 | Neural Rate and Timing Cues for Detection and Discrimination of Amplitude-Modulated Tones in the Awake Rabbit Inferior Colliculus. Journal of Neurophysiology, 2007, 97, 522-539. | 0.9 | 102 |
| 57 | Perception of Temporally Processed Speech by Listeners with Hearing Impairment. Ear and Hearing, 2007, 28, 512-523. | 1.0 | 4 |
| 58 | A Fast Real-Time Auditory-Nerve Model. , 2007, , . | | 1 |
| 59 | Detection of Tones in Reproducible Noise Maskers by Rabbits and Comparison to Detection by Humans. JARO - Journal of the Association for Research in Otolaryngology, 2007, 8, 522-538. | 0.9 | 7 |
| 60 | Temporal Measures and Neural Strategies for Detection of Tones in Noise Based on Responses in Anteroventral Cochlear Nucleus. Journal of Neurophysiology, 2006, 96, 2451-2464. | 0.9 | 14 |
| 61 | Determination of the Potential Benefit of Time-Frequency Gain Manipulation. Ear and Hearing, 2006, 27, 480-492. | 1.0 | 86 |
| 62 | Correction of the Peripheral Spatiotemporal Response Pattern: A Potential New Signal-Processing Strategy. Journal of Speech, Language, and Hearing Research, 2006, 49, 848-855. | 0.7 | 10 |
| 63 | Cues for masked amplitude-modulation detection. Journal of the Acoustical Society of America, 2006, 120, 978-990. | 0.5 | 9 |
| 64 | Binaural detection with narrowband and wideband reproducible noise maskers. III. Monaural and diotic detection and model results. Journal of the Acoustical Society of America, 2006, 119, 2258-2275. | 0.5 | 24 |
| 65 | Predictions of formant-frequency discrimination in noise based on model auditory-nerve responses. Journal of the Acoustical Society of America, 2006, 120, 1435-1445. | 0.5 | 6 |
| 66 | The Spontaneous-Rate Histogram of the Auditory Nerve Can Be Explained by Only Two or Three Spontaneous Rates and Long-Range Dependence. JARO - Journal of the Association for Research in Otolaryngology, 2005, 6, 148-159. | 0.9 | 25 |
| 67 | Encoding of vowel-like sounds in the auditory nerve: Model predictions of discrimination performance. Journal of the Acoustical Society of America, 2005, 117, 1210-1222. | 0.5 | 8 |
| 68 | Response Properties of an Integrate-and-Fire Model That Receives Subthreshold Inputs. Neural Computation, 2005, 17, 2571-2601. | 1.3 | 10 |
| 69 | Analysis of models for the synapse between the inner hair cell and the auditory nerve. Journal of the Acoustical Society of America, 2005, 118, 1540-1553. | 0.5 | 26 |
| 70 | Effects of Inhibitory Feedback in a Network Model of Avian Brain Stem. Journal of Neurophysiology, 2005, 94, 400-414. | 0.9 | 40 |
| 71 | A Model for Interaural Time Difference Sensitivity in the Medial Superior Olive: Interaction of Excitatory and Inhibitory Synaptic Inputs, Channel Dynamics, and Cellular Morphology. Journal of Neuroscience, 2005, 25, 3046-3058. | 1.7 | 106 |
| 72 | Control of Cellular Pattern Formation in the Vertebrate Inner Retina by Homotypic Regulation of Cell-Fate Decisions. Journal of Neuroscience, 2005, 25, 4565-4576. | 1.7 | 23 |

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| 73 | A phenomenological model of peripheral and central neural responses to amplitude-modulated tones. Journal of the Acoustical Society of America, 2004, 116, 2173-2186. | 0.5 | 151 |
| 74 | Cellular patterns in the inner retina of adult zebrafish: Quantitative analyses and a computational model of their formation. Journal of Comparative Neurology, 2004, 471, 11-25. | 0.9 | 27 |
| 75 | Quantifying the Information in Auditory-Nerve Responses for Level Discrimination. JARO - Journal of the Association for Research in Otolaryngology, 2003, 4, 294-311. | 0.9 | 56 |
| 76 | A phenomenological model for the responses of auditory-nerve fibers. II. Nonlinear tuning with a frequency glide. Journal of the Acoustical Society of America, 2003, 114, 2007-2020. | 0.5 | 67 |
| 77 | CS-Dependent Response Probability in an Auditory Masked-Detection Task: Considerations based on Models of Pavlovian Conditioning. Quarterly Journal of Experimental Psychology Section B: Comparative and Physiological Psychology, 2003, 56, 193-205. | 2.8 | 3 |
| 78 | Binaural detection with narrowband and wideband reproducible noise maskers: I. Results for human. Journal of the Acoustical Society of America, 2002, 111, 336-345. | 0.5 | 24 |
| 79 | Binaural detection with narrowband and wideband reproducible noise maskers: II. Results for rabbit. Journal of the Acoustical Society of America, 2002, 111, 346-356. | 0.5 | 18 |
| 80 | Quantifying the implications of nonlinear cochlear tuning for auditory-filter estimates. Journal of the Acoustical Society of America, 2002, 111, 996-1011. | 0.5 | 38 |
| 81 | Studies of binaural detection in the rabbit (Oryctolagus cuniculus) with Pavlovian conditioning.. Behavioral Neuroscience, 2001, 115, 650-660. | 0.6 | 13 |
| 82 | Auditory nerve model for predicting performance limits of normal and impaired listeners. Acoustics Research Letters Online: ARLO, 2001, 2, 91-96. | 0.7 | 126 |
| 83 | Evidence for two distinct mechanisms of neurogenesis and cellular pattern formation in regenerated goldfish retinas. Journal of Comparative Neurology, 2001, 431, 363-381. | 0.9 | 69 |
| 84 | A phenomenological model for the responses of auditory-nerve fibers: I. Nonlinear tuning with compression and suppression. Journal of the Acoustical Society of America, 2001, 109, 648-670. | 0.5 | 303 |
| 85 | Evaluating Auditory Performance Limits: I. One-Parameter Discrimination Using a Computational Model for the Auditory Nerve. Neural Computation, 2001, 13, 2273-2316. | 1.3 | 169 |
| 86 | Evaluating Auditory Performance Limits: II. One-Parameter Discrimination with Random-Level Variation. Neural Computation, 2001, 13, 2317-2338. | 1.3 | 27 |
| 87 | Rate and timing cues associated with the cochlear amplifier: Level discrimination based on monaural cross-frequency coincidence detection. Journal of the Acoustical Society of America, 2001, 110, 2065-2084. | 0.5 | 65 |
| 88 | Cell mosaic patterns in the native and regenerated inner retina of zebrafish: Implications for retinal assembly. Journal of Comparative Neurology, 2000, 416, 356-367. | 0.9 | 57 |
| 89 | Frequency glides in the impulse responses of auditory-nerve fibers. Journal of the Acoustical Society of America, 1999, 105, 2384-2391. | 0.5 | 104 |
| 90 | Temporal response properties of neurons in the auditory pathway. Current Opinion in Neurobiology, 1999, 9, 442-446. | 2.0 | 23 |

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|---|---|---|---|
| 91 | A model for binaural response properties of inferior colliculus neurons. II. A model with interaural time difference-sensitive excitatory and inhibitory inputs and an adaptation mechanism. Journal of the Acoustical Society of America, 1998, 103, 494-506. | 0.5 | 45 |
| 92 | A model for binaural response properties of inferior colliculus neurons. I. A model with interaural time difference-sensitive excitatory and inhibitory inputs. Journal of the Acoustical Society of America, 1998, 103, 475-493. | 0.5 | 51 |
| 93 | Spatiotemporal Tuning of Low-Frequency Cells in the Anteroventral Cochlear Nucleus. Journal of Neuroscience, 1998, 18, 1096-1104. | 1.7 | 9 |
| 94 | Nonlinear feedback models for the tuning of auditory nerve fibers. Annals of Biomedical Engineering, 1996, 24, 440-450. | 1.3 | 0 |
| 95 | Time and frequency domain methods for heart rate variability analysis: A methodological comparison. Psychophysiology, 1995, 32, 492-504. | 1.2 | 86 |
| 96 | Enhancement of neural synchronization in the anteroventral cochlear nucleus. I. Responses to tones at the characteristic frequency. Journal of Neurophysiology, 1994, 71, 1022-1036. | 0.9 | 397 |
| 97 | Spatiotemporal encoding of sound level: Models for normal encoding and recruitment of loudness. Hearing Research, 1994, 76, 31-44. | 0.9 | 74 |
| 98 | A Nonlinear Feedback Model for the Frequency Tuning of Auditory Nerve Fibers. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1994, 27, 523-524. | 0.4 | 0 |
| 99 | A model for the responses of lowâ€frequency auditoryâ€nerve fibers in cat. Journal of the Acoustical Society of America, 1993, 93, 401-417. | 0.5 | 228 |
| 100 | Projections of physiologically characterized globular bushy cell axons from the cochlear nucleus of the cat. Journal of Comparative Neurology, 1991, 304, 387-407. | 0.9 | 293 |
| 101 | Interaural time sensitivity in the inferior colliculus of the albino cat. Journal of Comparative Neurology, 1990, 295, 438-448. | 0.9 | 26 |
| 102 | Sensitivities of cells in anteroventral cochlear nucleus of cat to spatiotemporal discharge patterns across primary afferents. Journal of Neurophysiology, 1990, 64, 437-456. | 0.9 | 61 |
| 103 | Responses of low-frequency cells in the inferior colliculus to interaural time differences of clicks: excitatory and inhibitory components. Journal of Neurophysiology, 1989, 62, 144-161. | 0.9 | 102 |
| 104 | The radiation impedance of the external ear of cat: Measurements and applications. Journal of the Acoustical Society of America, 1988, 84, 1695-1708. | 0.5 | 44 |
| 105 | Temporal coding of resonances by low-frequency auditory nerve fibers: single-fiber responses and a population model. Journal of Neurophysiology, 1988, 60, 1653-1677. | 0.9 | 152 |
| 106 | Effects of interaural time delays of noise stimuli on low-frequency cells in the cat's inferior colliculus. III. Evidence for cross-correlation. Journal of Neurophysiology, 1987, 58, 562-583. | 0.9 | 131 |
| 107 | A temporal analysis of auditoryâ€nerve fiber responses to spoken stop consonantâ€“vowel syllables. Journal of the Acoustical Society of America, 1986, 79, 1896-1914. | 0.5 | 57 |