Lori **Holt**

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Publications

Journal Articles

1. Murphy, T. K., Nozari, N., & Holt, L. L. (2023). Transfer of statistical learning from passive speech perception to speech production. *Psychonomic Bulletin & Review*. https://doi.org/10.3758/s13423-023-02399-8
2. Symons, A. E., Holt, L. L., & Tierney, A. T. (2023). Informational masking influences segmental and suprasegmental speech categorization. *Psychonomic Bulletin & Review*. https://doi.org/10.3758/s13423-023-02364-5
3. Obasih, C. O., Luthra, S., Dick, F., & Holt, L. L. (2023). Auditory category learning is robust across training regimes. *Cognition*, *237*, 105467. https://doi.org/10.1016/j.cognition.2023.105467
4. Gabay, Y., Roark, C. L., & Holt, L. L. (2023). Impaired and spared auditory category learning in developmental dyslexia. *Psychological Science*, *34*(4), 468–480. https://doi.org/10.1177/09567976231151581
5. Gabay, Y., Karni, A., & Holt, L. L. (2023). Memory for incidentally learned categories evolves in the post-learning interval. *eLife*, *12*. https://doi.org/10.7554/elife.81855
6. Gabay, Y., Madlansacay, M., & Holt, L. L. (2022). Incidental auditory category learning and visuomotor sequence learning do not compete for cognitive resources. *Attention, Perception, & Psychophysics*, *85*(2), 452–462. https://doi.org/10.3758/s13414-022-02616-x
7. Jasmin, K., Tierney, A., Obasih, C., & Holt, L. (2022). Short-term perceptual reweighting in suprasegmental categorization. *Psychonomic Bulletin & Review*, *30*(1), 373–382. https://doi.org/10.3758/s13423-022-02146-5
8. Roark, C. L., & Holt, L. L. (2022). Long-term priors constrain category learning in the context of short-term statistical regularities. *Psychonomic Bulletin & Review*, *29*(5), 1925–1937. https://doi.org/10.3758/s13423-022-02114-z
9. Wu, Y. C., & Holt, L. L. (2022). Phonetic category activation predicts the direction and magnitude of perceptual adaptation to accented speech. *Journal of Experimental Psychology: Human Perception and Performance*, *48*(9), 913–925. https://doi.org/10.1037/xhp0001037
10. Rupp, K., Hect, J. L., Remick, M., Ghuman, A., Chandrasekaran, B., Holt, L. L., & Abel, T. J. (2022). Neural responses in human superior temporal cortex support coding of voice representations. *PLOS Biology*, *20*(7), e3001675. https://doi.org/10.1371/journal.pbio.3001675
11. Roark, C. L., Lehet, M. I., Dick, F., & Holt, L. L. (2022). The representational glue for incidental category learning is alignment with task-relevant behavior. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *48*(6), 769–784. https://doi.org/10.1037/xlm0001078
12. Caras, M. L., Happel, M. F. K., Chandrasekaran, B., Ripollés, P., Keesom, S. M., Hurley, L. M., Remage-Healey, L., Holt, L. L., & Wright, B. A. (2022). Non-sensory influences on auditory learning and plasticity. *Journal of the Association for Research in Otolaryngology*, *23*(2), 151–166. https://doi.org/10.1007/s10162-022-00837-3
13. Dastolfo-Hromack, C., Bush, A., Chrabaszcz, A., Alhourani, A., Lipski, W., Wang, D., Crammond, D. J., Shaiman, S., Dickey, M. W., Holt, L. L., Turner, R. S., Fiez, J. A., & Richardson, R. M. (2021). Articulatory gain predicts motor cortex and subthalamic nucleus activity during speech. *Cerebral Cortex*, *32*(7), 1337–1349. https://doi.org/10.1093/cercor/bhab251
14. Zhang, H., Wiener, S., & Holt, L. L. (2022). Adjustment of cue weighting in speech by speakers and listeners: Evidence from amplitude and duration modifications of mandarin chinese tone. *The Journal of the Acoustical Society of America*, *151*(2), 992–1005. https://doi.org/10.1121/10.0009378
15. DiNino, M., Holt, L. L., & Shinn-Cunningham, B. G. (2021). Cutting through the noise: Noise-induced cochlear synaptopathy and individual differences in speech understanding among listeners with normal audiograms. *Ear & Hearing*, *43*(1), 9–22. https://doi.org/10.1097/aud.0000000000001147
16. Zhao, S., Brown, C. A., Holt, L. L., & Dick, F. (2022). Robust and efficient online auditory psychophysics. *Trends in Hearing*, *26*, 233121652211187. https://doi.org/10.1177/23312165221118792
17. Chrabaszcz, A., Wang, D., Lipski, W. J., Bush, A., Crammond, D. J., Shaiman, S., Dickey, M. W., Holt, L. L., Turner, R. S., Fiez, J. A., & Richardson, R. M. (2021). Simultaneously recorded subthalamic and cortical LFPs reveal different lexicality effects during reading aloud. *Journal of Neurolinguistics*, *60*, 101019. https://doi.org/10.1016/j.jneuroling.2021.101019

18. Zhang, X., Wu, Y. C., & Holt, L. L. (2021). The learning signal in perceptual tuning of speech: Bottom up versus top-down information. *Cognitive Science*, *45*(3). https://doi.org/10.1111/cogs.12947

19. Gabay, Y., & Holt, L. L. (2020). Adaptive plasticity under adverse listening conditions is disrupted in developmental dyslexia. *Journal of the International Neuropsychological Society*, *27*(1), 12–22. https://doi.org/10.1017/s1355617720000661

20. Laffere, A., Dick, F., Holt, L. L., & Tierney, A. (2021). Attentional modulation of neural entrainment to sound streams in children with and without ADHD. *NeuroImage*, *224*, 117396. https://doi.org/10.1016/j.neuroimage.2020.117396

Preprints

1. Murphy, T., Holt, L. L., & Nozari, N. (2023). *Transfer of statistical learning from passive speech perception to speech production*. https://doi.org/10.31234/osf.io/wtpdz

2. Vissani, M., Bush, A., Lipski, W. J., Fischer, P., Neudorfer, C., Holt, L. L., Fiez, J. A., Turner, R. S., & Richardson, R. M. (2023). *Speech induces spatiotemporal and frequency specific subthalamic-cortical spike-phase coupling events*. https://doi.org/10.1101/2023.10.18.562969

3. Hodson, A. J., Shinn-Cunningham, B., & Holt, L. L. (2022). *Statistical learning across passive listening adjusts perceptual weights of speech input dimensions*. https://doi.org/10.31234/osf.io/4kxz3

4. Obasih, C. O., Luthra, S., Dick, F., & Holt, L. L. (2022). *Auditory category learning is robust across training regimes*. https://doi.org/10.31234/osf.io/ygwhd

5. Wu, Y. C., Viswanathan, V., Abel, T. J., & Holt, L. L. (2022). *Auditory cortical responses to speech are shaped by statistical learning of short-term speech input regularities*. https://doi.org/10.1101/2022.12.19.520832

6. Smith, E., Holt, L. L., & Dick, F. (2022). *A one-man bilingual cocktail party: Linguistic and non-linguistic effects on bilinguals' speech comprehension in mandarin and english*. https://doi.org/10.31234/osf.io/k8rzt

Books

1. Holt, L. L. (2022). *The auditory cognitive neuroscience of speech perception in context*. Speech Perception.

Book Chapters

Professional Presentations

Breaking auditory psychophysics out of the laboratory
46th Annual MidWinter Meeting of the Association for Research in Otolaryngology *2023*

Category learning and dimension-selective attention in auditory cortex
46th Annual MidWinter Meeting of the Association for Research in Otolaryngology *2023*

Listening in on auditory learning
University of Rochester *2023*

Listening in on auditory learning
Duolingo Headquarters *2022*

Listening in on auditory learning
The University of Texas at Austin *2022*

Statistical learning is supported by multiple mechanisms
TEX 2022 *2022*

Incidental auditory category learning and its implications for language acquisition
IEEE Haptics Symposium *2021*

Incidental category learning of L2 speech sounds: Evidence from Chinese tones and Japanese pitch accent
International Symposium on Bilingual and L2 Processing in Adults and Children *2021*

Listening in on auditory learning
Cornell University *2021*

Online regularities and prior knowledge conspire to shape speech perception

Trieste Encounter on Cognitive Science (TEX) 2021: Predictive Processes and Statistical Learning *2021*

Speech perception in context

University of Maryland *2021*

Supervised error-driven learning in speech perception

Association for Research in Otolaryngology *2021*

Conference Abstracts

Auditory attention guides statistical learning across competing speech regularities

Psychonomics Society Meeting *2023*

Children and adults with developmental dyslexia are impaired in Incidental learning of complex sound categories

International Workshop on Reading and Developmental Dyslexia *2023*

Human intracranial responses to speech: Latency and attention effects

Association for Research in Otolaryngology, *2023*

Impaired Incidental learning of complex sound categories in children and adults with dyslexia

10th Israeli Conference on Cognition Research (ISCoP) *2023*

Investigation of intracerebral auditory cortex electrophysiology and spectrotemporal feature processing in human auditory cortex using voice-like acoustic stimuli

Advances and Perspectives in Auditory Neuroscience *2023*

Listening to the present in relation to the past to predict the future

Psychonomics Society Meeting *2023*

Neural correlates of statistically-driven auditory selective attention

Advances and Perspectives in Auditory Neuroscience *2023*

Neural signatures of adaptive plasticity in speech perception as measured with human intracranial stereo-electroencephalography

Association for Research in Otolaryngology *2023*

Passive statistical learning of speech distributions is not constrained to specific phonemes

Psychonomics Society Meeting *2023*

Perceptual Statistical Learning Transfer to Speech Perception Even with Sparse Production Opportunities

Psychonomics Society Meeting *2023*

Separable effects of speech input statistics on phonetic and talker processing

Psychonomics Society Meeting *2023*

Statistical learning of task-irrelevant acoustic dimensions

Advances and Perspectives in Auditory Neuroscience *2023*

Statistical regularities across task-irrelevant dimensions impact auditory decisions.

Association for Research in Otolaryngology *2023*

Statistical regularities of accented speech influence listeners' own speech productions

Acoustical Society of America *2023*

The influence of sound statistics on auditory decisions in ferrets

Advances and Perspectives in Auditory Neuroscience *2023*

Tracking engagement in real-world human communication using wearable sensors

Advances and Perspectives in Auditory Neuroscience *2023*

Using frequency selectivity to examine category-informative dimension-selective attentio

Society for Neurobiology of Language *2023*

Using frequency selectivity to examine category-informative dimension-selective attention

Advances and Perspectives in Auditory Neuroscience *2023*

Using frequency selectivity to examine category-informative dimension-selective attention

Association for Research in Otolaryngology *2023*

Activity in the subthalamic nucleus indexes the coupling of articulation and vocal intensity

Society for the Neurobiology of Language *2022*

Dimension-based statistical learning in older adults

Proceedings of the Cognitive Science Society *2022*

Dimension-based statistical learning in older adults

Cognitive Science Society *2022*

Distributional speech regularities maintained across long delays influence perceptual weighting of speech input

63rd Annual Meeting of the Psychonomic Society *2022*

Intracerebral investigation of the neural representation of voice in human auditory cortex using voice-like acoustic stimuli

1st Interdisciplinary Conference on Voice Identity (VoiceID): Perception, Production, and Computational Approaches *2022*

Neural systems underlying source- and dimension-based auditory selective attention to naturalistic speech

Society for the Neurobiology of Language *2022*

Phonetic-Intensity Encoding in the Precentral Gyrus and Subthalamic Nucleus

Motor Speech Conference *2022*

Statistical learning guides auditory attention

Cognitive Science Society *2022*

Statistical learning transfers from speech perception to production

The 12th International Workshop on Language Production (IWoLP) *2022*

Statistical regularities of task-irrelevant dimensions impact auditory decisions.

Acoustical Society of America *2022*

The influence of sound statistics on auditory decisions in ferrets

Advances and Perspectives in Auditory Neuroscience *2022*

The influence of sound statistics on auditory decisions in ferrets

Society for Neuroscience *2022*

Using frequency selectivity to examine category-informative dimension-selective attention

Society for the Neurobiology of Language *2022*

erceptual adaptation to speech input statistics is driven by predictions from category representations

2022

sing frequency selectivity to examine category-informative dimension-selective attention.

Acoustical Society of America *2022*

Honors

Fellow *New York, US*

Acoustical Society of America *2022*

Funding

The Behavioral Brain (B2) Research Training Program

National Institute of General Medical Sciences, T32GM142630

Funding: $735,628

2022 - 2027

SBE-UKRI: Contextually and probabilistically weighted auditory selective attention: from neurons to networks

Directorate for Social, Behavioral & Economic Sciences, 2219521

Funding: $1,034,150

2022 - 2025

Flexible representation of speech in the supratemporal plane.

National Institute on Deafness and Other Communication Disorders, R21DC019217

Funding: $523,837

2021 - 2024

Behavioral outcomes and neurobiological mechanisms of sustained auditory selective attention

National Institute on Deafness and Other Communication Disorders, R01DC017734

Funding: $2,093,753

2020 - 2024

Incidental learning across statistically-structured input in active tasks

Directorate for Social, Behavioral & Economic Sciences, 1950054

Funding: $824,987

2020 - 2024

Transfer of statistical learning from perception to production

Directorate for Social, Behavioral & Economic Sciences, 2217415

Funding: $553,741

2022 - 2023

SYMPOSIUM ON COGNITIVE AUDITORY NEUROSCIENCE (SCAN)

National Institute on Deafness and Other Communication Disorders, R13DC018243

Funding: $74,132

2020 - 2023

NSF/SBE-BSF: Trajectories of acquisition, consolidation and retention in incidental auditory category learning

Directorate for Social, Behavioral & Economic Sciences, 1655126

Funding: $979,550

2017 - 2023

Doctoral Dissertation Research: Mechanisms of adaptive plasticity in speech perception

Directorate for Social, Behavioral & Economic Sciences, 1941357

Funding: $16,319

2020 - 2022

Predoctoral Training Program in Behavioral Brain Research

National Institute of General Medical Sciences, T32GM081760

Funding: $4,324,296

2007 - 2022

Service

Cognitive Science Society

Seattle, US

Sponsorship Committee

2024 - present

Windward Intitute

New York, US

Advisory Board

2023 - present

Cognition

Amsterdam, NL

Section Editor

2022 - 2026

Open Mind

Cambridge, US

Editorial Board

NA - 2024

Center for the Neural Basis of Cognition

Pittsburgh, US

Co-Director

2022 - 2023

Symposium for Cognitive Auditory Neuroscience

Pittsburgh, US

Founding Organiser

2020 - 2023

Carnegie Mellon University *Pittsburgh, US*

NIH (NIGMS) T32 Training Grant, T32GM081760, Predoctoral Training at the Interface of the Behavioral and Biomedical Sciences *2007 - 2023*

Mentoring and Teaching

Mentoring

Alexandria Vail

Postdoctoral Mentor *2024 - present*

Dr. Craig Thorburn

Postdoctoral Mentor *2023 - present*

Dr. Sahil Luthra

Postdoctoral Mentor *2021 - 2025*

Dr. Franziska Broker

Postdoctoral Mentor *2023 - 2024*

Austin Luor

Dissertation Supervisor *2020 - 2024*

Timothy Murphy

Dissertation Supervisor *NA - 2024*

Jenah Black

Dissertation Supervisor *NA - 2023*

Chisom Obasih

Dissertation Supervisor *NA - 2023*

Alana Hodson

Dissertation Supervisor *NA - 2023*

Sunreeta Bhattacharya

Graduate Student Research Rotation Supervisor *NA - 2023*

Teaching

PSY332 - Behavioral Neuroscience

Instructor *2024 - present*

PSY308 - Biopsychology

Instructor *2023 - present*