

# Lori L. Holt

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<b>EDUCATION</b>	Ph.D., Department of Psychology Cognitive Psychology, Neurophysiology Minor University of Wisconsin-Madison	1995-1999
	Thesis: <i>Auditory Constraints on Speech Perception: An Examination of Spectral Contrast</i> B.S. Department of Psychology University of Wisconsin-Madison	1991-1995
<b>EMPLOYMENT</b>	<b>Professor</b> Department of Psychology Carnegie Mellon University, Pittsburgh, PA	2010-present
	<b>Affiliated Faculty, Member Executive Committee</b> Center for the Neural Basis of Cognition Carnegie Mellon University & University of Pittsburgh	1999-present
	<b>Adjunct Professor</b> Department of Neuroscience University of Pittsburgh, Pittsburgh, PA	2011-present
	<b>Training Faculty Member</b> Center for Neuroscience, University of Pittsburgh University of Pittsburgh, Pittsburgh, PA	2012-present
	<b>Member, Pittsburgh Hearing Research Center</b>	2017-present
	Associate Professor, Tenured Department of Psychology Carnegie Mellon University, Pittsburgh, PA	2006-2010
	Associate Professor, Untenured Department of Psychology Carnegie Mellon University, Pittsburgh, PA	2004-2006

Assistant Professor Department of Psychology Carnegie Mellon University, Pittsburgh, PA	1999-2004
National Science Foundation Predoctoral Fellow University of Wisconsin-Madison	1995-1999
Graduate Research Assistant Department of Psychology, Dr. Keith Kluender University of Wisconsin-Madison	1995-1999
Graduate Research Assistant Department of Neurophysiology, Dr. William Rhode University of Wisconsin-Madison	1998-1999

**AWARDS &  
HONORS**

James McKeen Cattell Sabbatical Award	2015
Troland Research Award, National Academy of Sciences	2013
Association for Psychological Science Fellow	2011
Virginia W. Toomey Award in Auditory Science	2008
Association for Psychological Science "Rising Star" in Psychology	2007
Evie and Ron Krancer Award in Auditory Science	2007
Dennis Klatt Research in Speech Science Award American Speech Language and Hearing Association	2002
14 <sup>th</sup> Annual Beckman Frontiers of Science Symposium Invitee, National Academy of Sciences	2002
21 <sup>st</sup> Century Scientist Award – Bridging Mind, Brain & Behavior, James S. McDonnell Foundation	2002-2006
Acoustical Society Young Investigator Award Acoustical Society of America	1999
Henry Vilas Professional Development Fellowship University of Wisconsin	1999
National Science Foundation Predoctoral Research Fellowship	1995-1998

Ruth G. & Joseph D. Matarazzo Research Award American Psychological Foundation	1998
Sigma Xi Grants-In-Aid of Research Award National Sigma Xi Chapter	1998
Royalty Research Award, University of Wisconsin	1997
M. Schwartz Experimental Psychology Fellow University of Wisconsin	1997
Roderick Menzies Graduate Fellowship University of Wisconsin	1996
Henry Vilas Fellowship, University of Wisconsin	1995
Phi Beta Kappa	1995
Herfurth Award to Outstanding Senior Woman University of Wisconsin	1994
Gilchrist Undergraduate Research Award University of Wisconsin	1994
Hilldale Undergraduate Research Award, University of Wisconsin	1994
Psi Chi Undergraduate Research Award, University of Wisconsin	1994
Ferdinand Plaenert Scholarship, University of Wisconsin	1991
Academic Excellence Scholarship, State of Wisconsin	1991

**MEMBER**

Acoustical Society of America, Cognitive Neuroscience Society, Psychonomic Society, Cognitive Science Society, American Psychological Society

**EDITORIAL  
ACTIVITIES**

***Editorial Boards (past and present):***

*Psychological Review*  
*Psychonomic Bulletin & Review*  
*Journal of Experimental Psychology: General*  
*Review Editorial Board of Frontiers in Auditory  
Cognitive Neuroscience*  
*Attention, Perception & Psychophysics*

***Associate Editor (present):***

*Open Mind*  
*Auditory Perception & Cognition*  
*Attention, Perception &  
Psychophysics*

**Ad Hoc Reviewer of Submitted Manuscripts:**

*Acoustic Research Letters Online*  
*Animal Cognition*  
*Brain and Language*  
*Cerebral Cortex*  
*Cognition*  
*Cognitive, Affective, and Behavioral Neuroscience*  
*Cognitive Brain Research*  
*Cognitive Psychology*  
*Cortex*  
*Cognitive Science*  
*Current Directions in Psychological Science*  
*Developmental Psychobiology*  
*eLife*  
*Journal of the Acoustical Society of America*  
*Journal of Experimental Psychology: Human Perception & Performance*  
*Journal of Memory and Language*  
*Frontiers in Perceptual Sciences*

*IEEE Transactions in Haptics*  
*Journal of Phonetics*  
*Language and Cognitive Processes*  
*Language and Speech*  
*Memory and Cognition*  
*Nature Communications*  
*Nature Reviews Neuroscience*  
*Open Mind*  
*Perception & Psychophysics*  
*Phonetica*  
*PLoS One*  
*Psychonomic Bulletin and Review*  
*Psychological Review*  
*Speech Communication*  
*Frontiers in Auditory Cognitive Neuroscience*

**Reviewer of Grant Proposals:**

*National Science Foundation*  
*National Institutes of Health*  
*Autism Now Foundation*  
*Wellcome Trust,*  
*Executive Board of the Austrian Science Fund*

**OTHER PROFESSIONAL ACTIVITIES**

Co-director with Dr. Julie Fiez, **NIH (NIGMS) T32 Training Grant, T32GM081760, Predoctoral Training at the Interface of the Behavioral and Biomedical Sciences.**

Funded since 2007, with 19 current and past graduate trainees.

Speech Communication Technical Committee Member, Acoustical Society of America

**Organizing Committee**, 143<sup>rd</sup> Meeting of the Acoustical Society of America, Pittsburgh, PA, June, 2002

**Organizing Committee**, International Conference on Spoken Language Processing (ICSLP/INTERSPEECH 2006, Pittsburgh, PA)

**Conference Organizing Committee**, Advances and Perspectives in Auditory Neuroscience (APAN), 2016-present

Chair, Young Investigator Award Committee, Advances and Perspectives in Auditory Neuroscience (APAN), 2017; 2018

PENDING  
GRANT SUPPORT

Co-Investigator with Principal Investigator Dr. Seth Weiner, Carnegie Mellon University, **Examining the impact of non-linguistic incidental auditory category training on adult language acquisition.** National Institutes of Health.

Principal Investigator with Drs. Frederic Dick, Adam Tierney, Birkbeck College, University of London, and Barbara Shinn-Cunningham, CMU. **Dimension-based auditory selective attention,** National Institutes of Health.

Co-Investigator with Principal Investigator Dr. Mark Richardson, University of Pittsburgh, **Basal Ganglia-thalamocortical Loop Function in Speech Perception and Production,** National Institutes of Health.

Principal Investigator with Drs. Barbara Shinn-Cunningham, Carnegie Mellon University and Bharath Chandrasekaran, University of Pittsburgh, **The Pittsburgh Cognitive Auditory Neuroscience (PCAN) Workshop,** National Institutes of Health.

Principal Investigator with Drs. Barbara Shinn-Cunningham, Carnegie Mellon University and Bharath Chandrasekaran, University of Pittsburgh, **The Pittsburgh Cognitive Auditory Neuroscience (PCAN) Workshop,** National Science Foundation.

Principal Investigator, with Dr. Frederic Dick, Birkbeck College, University of London. **Incidental learning across statistically-structured input in active tasks.** National Science Foundation.

Principal Investigator with Dr. Marlene Cohen, University of Pittsburgh. **Biological constraints on flexible neural computations.** National Science Foundation.

Principal Investigator with Dr. Marlene Cohen, University of Pittsburgh. **Biological Constraints on Neural Computation and Decision-Making.** PittSEED Fund.

Principal Investigator with Dr. Marlene Cohen, University of Pittsburgh. **Biological Constraints on Neural Computation and Decision-Making.** Charles E. Kaufman Foundation.

ONGOING  
GRANT  
SUPPORT

Co-Director with Dr. Julie Fiez, University of Pittsburgh, **Predocutorial Training Program in Behavioral Brain Research (T32),** T32GM081760, National Institute of General Medical Sciences, Institutional NRSA Award, 7/1/2007-6/30/2022.

Co-Investigator with Drs. Yafit Gabay and Avi Karni, **The dynamics of procedural auditory category learning in developmental dyslexia.** Binational Science Foundation, 01/2017-12/2019, \$151,200.

Principal Investigator with Drs. Yafit Gabay and Avi Karni, **NSF/SBE-BSF: Trajectories of acquisition, consolidation and retention in incidental auditory category learning**, National Science Foundation. \$974,755

Principal Investigator (with Drs. Seth Wiener, Mike Christel), **Wedding basic science and pedagogy: Is classroom foreign language learning supported by incidental auditory training?** ProSEED / Simon Initiative Grant, Carnegie Mellon University, \$15,000.

Co-Investigator (with Principal Investigators Dr. Helen Tager-Flusberg and Dr. Barbara Shinn-Cunningham), **A Novel Intervention for Training Auditory Attention in Adolescents with Autism Spectrum Disorder**, Department of Defense, \$789,000

Principal Investigator, **The Silent Service: An Online Game for Delivery of Auditory Tasks at Scale**, Games for Engaging Learning Seed Grant, National Institutes of Health, \$10,000.

Co-Investigator (with Principal Investigator Dr. Adam Tierney, Birkbeck College, University of London). **Training temporally-driven sustained selective attention to sound in children with ADHD**. Waterloo Foundation.

Principal Investigator with Dr. Seth Wiener, CMU. **Wedding basic science and pedagogy: Is classroom foreign language learning supported by incidental auditory training?** ProSEED and TEL.

Principal Investigator with Drs. Barbara Shinn-Cunningham and Bharath Chandrasekaran. **Cognitive Processing in Human and Machine Listening**. DSF Workshop Grant, Mellon College of Science, Carnegie Mellon University.

## PAST GRANT SUPPORT

Principal Investigator, **Formation and tuning of complex auditory categories**, National Institutes of Health, 3R01DC004674-09, funded continuously 09/01/01 through 01/31/2016; current project period \$1,250,000 over 5 years.

Principal Investigator with Doctoral Student Ran Liu, **Doctoral Dissertation Research: Investigating generalization, transfer, and representation resulting from non-native speech category training**. December 2015.

Principal Investigator, **Uncovering the Neural Basis of Auditory Expertise**, Berkman Faculty Development Fund, \$6250, January 2007.

Principal Investigator, **Electrophysiological Investigations of Auditory Cognition**, Pilot Imaging Program, Department of Radiology Magnetic Resonance Research Center, University of Pittsburgh, \$7650, January 2008.

Principal Investigator, Examining context-dependent speech categorization in human listeners using magnetoencephalography (MEG), National Organization for Hearing Research, submitted January 2008, \$20,000 over 1 year. Winner of the 2008 Virginia W. Toomey Award in Auditory Science.

Principal Investigator with co-Investigator Dr. Kaori Idemaru, Development of Eyetracking Methodology to Investigate Cue Weighting in Auditory Categorization, National Organization for Hearing Research, \$20,000, 2/2007-2/2008. Winner of the 2007 Evie and Ron Krancer Award in Auditory Science.

Co-Investigator with Dr. Sheila Pratt, University of Pittsburgh, Dr. Diane Sabo, Children's Hospital, and Dr. Suzanne Curtin, University of Calgary, Behavioral Investigations of Vowel Perception in Infants With and Without Hearing Impairment, \$20,000, National Organization of Hearing Research.

Co-Investigator with Dr. Suzanne Curtin, University of Calgary and Dr. Scott Kiesling, University of Pittsburgh, Cognitive and Social Development in Linguistic Change: A Pilot Study, National Science Foundation, awarded, \$124,853, 08/31/05-08/31/2007 (no-cost extension to 08/2008).

Principal Investigator, Learning Complex Auditory Categories, National Science Foundation, renewal, \$629,666, BCS-0345773, 04/01/2001-03/31/2011.

Principal Investigator, Learning Complex Auditory Categories, National Institutes of Health (R01), \$237,000 over 4 years, 09/01/01-08/31/05.

Principal Investigator, Converging Models of the Influence of Experience upon Perception, Bridging Mind, Brain, & Behavior, 21<sup>st</sup> Century Scientist Award from the James S. McDonnell Foundation. \$449,515 over 3 years, 03/01/01-02/28/04.

Principal Investigator, An Investigation of the Perceptual and Learning Influences of Phonetic Category Formation, American Speech-Language-Hearing Association (Dennis Klatt Memorial Award), \$5,000, 10/24/02.

Principal Investigator, Learning Complex Auditory Categories, National Science Foundation, \$295,656 over 2 years, 09/01/01-8/31/04.

Principal Investigator, Spectral-temporal Boundaries of Perceptual Contrast: Developing the Gerbil as a Behavioral Model of Speech Perception, National Organization of Hearing Research, \$10,000, 1/15/01-1/14/02.

Principal Investigator, Developing the gerbil (*Meriones unguiculatus*) as an integrated model of speech perception, Deafness Research Foundation. \$20,000, 1/1/00-12/31/01.

Principal Investigator, Investigating the Role of Learning in Language Acquisition, Faculty Development Grant, Carnegie Mellon University \$6450, 12/01/99.

Co-Investigator, *Models of Multimodal Interactive Language Learning*, Riksbankens Jubileumsfond, The Bank of Sweden Tercentenary Foundation, in collaboration with Dr. Francisco Lacerda and Dr. Ulla Sundberg of University of Stockholm and Dr. Rolf Carlson of KTH, Swedish Royal Institute of Technology, \$745,000 over 5 years for CMU segment of the project, 01/01/04-12/31/09.

Principal Investigator, *Learning to accommodate variation in speech input*, National Science Foundation, \$500,000 over 3 years, 10/01/09-09/30/12 (no cost extension to 09/30/13).

## MANUSCRIPTS

(data/analyses complete, manuscripts in preparation)

Predicting online sound categorization performance, with Drs. Sung-joo Lim & Andrew Lotto

Adaptation of speech perception is impaired among adults with dyslexia, with Dr. Yafit Gabay

Procedural learning impairment in developmental dyslexia, with Dr. Yafit Gabay

## PEER-REVIEWED PUBLICATIONS,

submitted for review

Idemaru, K. & Holt, L. L. (*submitted*). **Generalization of dimension-based statistical learning.**

Roark, C. L. & Holt, L. L. (*submitted*). **The development of auditory information-integration category learning.** <https://psyarxiv.com/h8jkz/>

Roark, C. L. & Holt, L. L. (*submitted*). **Within-trial variability improves rule-based, not information-integration, category learning.** <https://psyarxiv.com/r673v/>

Jasmin, K. Dick, F., Holt, L. L., & Tierney, A. T. (*submitted*). **Tailored perception: listeners' strategies for perceiving speech fit their individual perceptual abilities.** bioRxiv 263079.

Holt, L. L. Huang, J., & Lotto, A. J. (*submitted*). **Harry Potter and the sorcerer's spectrum: the long-term average spectrum of audiobooks calibrates speech perception.**

Lim, R. & Holt, L. L. (*submitted*). **Investigating the role of variability in incidental learning of Mandarin lexical tone categories.**

Burkinshaw, K., Curtin, S., & Holt, L. L. (*submitted*). **Vowel space and variability in infant- and adult-directed speech.**

Zhang, X. & Holt, L. L. (*in revision*). **The learning signal in perceptual tuning of speech: Bottom-up vs. Top-down information**



Haigh, S. M., Laher, R. M., Murphy, T. K., Coffman, B. A., Ward, K. L., Leiter-McBeth, J. R., Holt, L. L., & Salisbury, D. F. (*in revision*). **Normal categorical perception to syllable-like stimuli in long term and in first episode schizophrenia.**

Liu, R. & Holt, L. L. (*in revision*). **Incidental training in a videogame Improves non-native speech perception and transfers to word learning.**

**PEER-REVIEWED  
PUBLICATIONS,**

**accepted or in  
press**

**PEER-REVIEWED  
PUBLICATIONS**

Lim, S. -J., Fiez, J. A., & Holt, L. L. (2019). **The role of the striatum in incidental learning of sound categories.** *Proceedings of the National Academy of Science*. <https://doi.org/10.1073/pnas.1811992116>.

Roark, C. L. & Holt, L. L. (2019). **Perceptual dimensions influence auditory category learning.** *Attention, Perception & Psychophysics, Special Issue in Honor of Randy Diehl*.

Chrabaszcz, A., Neumann W.J., Stretcu O, Lipski W., Bush A., Dastolfo-Hromack C, Wang D., Crammond D.J., Shaiman S., Dickey M.W., Holt L.L., Turner R.S., Fiez J.A., & Richardson R. M. (2019). **Subthalamic nucleus and sensorimotor cortex activity during speech production.** *Journal of Neuroscience*.

Sharma, N. K., Ganesh, S., Ganapathy, S., & Holt, L. L. (2019). **Talker change detection: A comparison of human and machine performance.** *Journal of the Acoustical Society of America*, 145, 131-.

Zhang, X. & Holt, L. L. (2018). **Simultaneous tracking of co-evolving distributional regularities in speech.** *Journal of Experimental Psychology: Human Perception & Psychophysics*, 44, 1760-1779.

Roark, C. L., & Holt, L. L. (2018). **Task and distribution sampling affect auditory category learning.** *Attention, Perception & Psychophysics*, 80, 1804-1822.

Gabay, Y., & Holt, L. L. (2018). **Short-term adaptation to sound statistics is unimpaired in developmental dyslexia.** *PLoS ONE*, 13(6): e0198146. <https://doi.org/10.1371/journal.pone.0198146>

Lipski, W., Alhourani, A., Pirnia, T., Jones, P., Dastolfo-Hromack, C., Helou, L., Crammond, D., Shaiman, S., Dickey, M., Holt, L.L., Fiez, J. A., Turner, R., and Richardson, R. (2018). **Subthalamic nucleus neurons differentially encode early and late aspects of speech production.** *Journal of Neuroscience*, 38, 5620-5631.

Holt, L. L., Tierney, A. T., Guerra, G., Laffere, A., & Dick, F. (2018). **The dynamic interplay of attention and context underlying speech processing.** *Hearing Research*, 366, 50-64.

Dick, F. K., Lehet, M. I., Callaghan, M. F., Keller, T. A., Sereno, M. I., & Holt, L. L. (2017). **Extensive tonotopic mapping across auditory cortex is recapitulated by spectrally-directed attention, and systematically related to cortical myeloarchitecture.** *Journal of Neuroscience*, 37, 12187-12201.

Lehet, M. & Holt, L. L. (2016). **Dimension-based statistical learning affects both speech perception and speech production.** *Cognitive Science*, 41, 885-912.

Guediche, S., Fiez, J. A., & Holt, L. L. (2016). **Adaptive plasticity in speech perception: effects of external information and internal predictions.** *Journal of Experimental Psychology: Human Perception & Performance*, 42, 1048-1059. PMC4925215

Lotto, A. J. & Holt, L. L. (2015). **The Frame Problem in speech communication: Defining the dimensional space for phonetic categorization.** *Topics in Speech Processes: Language Production and Perception, Festschrift in Honor of Harvey Sussman.*

Gabay, Y., & Holt, L. L. (2015). **Incidental learning of sound categories is impaired in developmental dyslexia.** *Cortex*, 73, 131-143.

Lotto, A. J., & Holt, L. L. (2015). **Speech perception: The view from the auditory system.** In G. Hickok and S. Small (Eds). *The Neurobiology of Language*. Academic Press.

Liu, R. & Holt, L. L. (2015). **Dimension-based statistical learning of vowels.** *Journal of Experimental Psychology: Human Perception & Performance*, 41, 1783-1798.

Gabay, Y., Dick, F., Zevin, J. D., & Holt, L. L. (2015). **Incidental auditory category learning.** *Journal of Experimental Psychology: Human Perception & Performance*, 41, 1124-1138. PMC4516559.

Lim, S., -J., Lacerda, F., & Holt, L. L. (2015). **Discovering functional units in continuous speech.** *Journal of Experimental Psychology: Human Perception & Performance*, 41, 1139-1152.

Gabay, Y., Vakil, E., Schiff, R., & Holt, L. L. (2015). **Probabilistic category learning in developmental dyslexia: Evidence from feedback and paired-associate tasks.** *Neuropsychology*. ePub ahead of print.

Gabay, Y., Thiessen, E. D., & Holt, L. L. (2015). **Impaired statistical learning in developmental dyslexia.** *Journal of Speech, Language and Hearing Research*, 58, 934-945. PMC4490081.

Klatzky, R., Holt, L. L., & Behrmann, M. (2015). **Representation of women in Cognition.** *Cognition*, 141, 170-171.

Guediche, S., Holt, L. L., Laurent, P., Lim, S. -J., & Fiez, J. (2015). **Evidence for cerebellar contributions to adaptive plasticity in speech perception.** *Cerebral Cortex*, 25, 1867-77. PMC4481605.

Lim, S.-J., Fiez, J. & Holt, L. L. (2014). **How may the basal ganglia contribute to auditory categorization and speech perception?** *Frontiers in Neuroscience*, 8, 230. PMC4117994.

Reinisch, E., Wozny, D. R., Mitterer, H., & Holt, L. L. (2014). **Phonetic category recalibration: what are the categories?** *Journal of Phonetics*, 45, 91-105. PMC4052890.

Holt, L. L. & Lotto, A. J. (2014). **Commentary: The alluring but misleading analogy between mirror neurons and the motor theory of speech.** *Behavioral and Brain Sciences*, 37, 204-205.

Idemaru, K. & Holt, L. L. (2014). **Specificity of dimension-based statistical learning in word recognition.** *Journal of Experimental Psychology: Human Perception & Performance*. 40, 1009-1021. PMC4241634.

Reinisch, E. & Holt, L. L. (2014). **Lexically-guided phonetic retuning of foreign-accented speech and its generalization.** *Journal of Experimental Psychology: Human Perception & Performance*, 40, 539-555. PMC3962813.

Guediche, S., Blumstein, S., Fiez, J. A. & Holt, L. L. (2014). **Speech perception under adverse conditions: Insights from behavioral, computational, and neuroscience research.** *Frontiers in Systems Neuroscience*, 7, 126. PMC3879477.

Hufnagle, D. G., Holt, L. L. & Thiessen, E. (2013). **Spectral information in nonspeech contexts influences children's categorization of ambiguous speech sounds.** *Journal of Experimental Child Psychology*, 116, 728-737. PMC3775975.

Idemaru, K. & Holt, L. L. (2013). **The long developmental trajectory of children's perception and production of English /r/-/l/. *Journal of the Acoustical Society of America*, 133, 4232-4246. PMC3689790.**

Idemaru, K. Holt, L. L., & Seltman, H. (2012). **Individual differences in cue weights are stable across time: the case of Japanese stop lengths.** *Journal of the Acoustical Society of America*, 132, 3950-3964. PMC3528741.

- Laing, E. J. C., Liu, R., Lotto, A. J., & Holt, L. L. (2012). **Tuned with a tune: talker normalization via general auditory processes.** *Frontiers in Psychology*, 3, 203. doi: 10.3389/fpsyg.2012.00203. PMC3381219.
- Huang, J. & Holt, L.L. (2012). **Listening for the norm: adaptive coding in speech categorization.** *Frontiers in Perception Science*, 3:10. PMC3078024.
- Ingvalson, E. M., Holt, L. L., & McClelland, J. L. (2011). **Can native Japanese listeners learn to differentiate /r-l/ on the basis of F3 onset frequency?** *Bilingualism: Language and Cognition*, 15, 255-274. PMC3538861.
- Idemaru, K. & Holt, L. L. (2011). **Word recognition reflects dimension-based statistical learning.** *Journal of Experimental Psychology: Human Perception & Performance*, 37, 1939-1956. PMC3285244.
- Lim, S. -J. & Holt, L. L. (2011). **Learning foreign sounds in an alien world: video game training improves non-native speech categorization.** *Cognitive Science*, 35, 1390-1405. PMC3166392.
- Ingvalson, E.M., McClelland, J. L., & Holt, L. L. (2011). **Predicting native English-like performance by native Japanese speakers.** *Journal of Phonetics*, 39, 571-584. PMC3196605.
- Stephens, J. D. W., & Holt, L. L. (2011). **A standard set of American-English voiced stop-consonant stimuli from morphed natural speech.** *Speech Communication*, 53, 877-888. PMC3110698.
- Huang, J. & Holt, L. L. (2011). **Evidence for the central origin of lexical tone normalization.** *Journal of the Acoustical Society of America*, 129, 1145-1148. PMC3078024.
- Liu, R. & Holt, L. L. (2011). **Changes in mismatch negativity reflecting the acquisition of complex, non-speech auditory categories.** *Journal of Cognitive Neuroscience*, 23, 683-698. PMC2945418.
- Stephens, J. D. W. & Holt, L. L. (2010). **Learning novel artificial visual cues for use in speech identification.** *Journal of the Acoustical Society of America*, 128, 2138-2149. PMC2981124.
- Holt, L. L. & Lotto, A. J. (2010). **Speech perception as categorization.** *Attention, Perception & Psychophysics*, 72, 1218-1227, PMC2921848.
- Ming, V. & Holt, L. L. (2009). **Efficient coding in human auditory perception.** *Journal of the Acoustical Society of America*, 126, 1312-1320. PMC2809690.

Huang, J. & Holt, L. L. (2009). **General perceptual contributions to lexical tone normalization.** *Journal of the Acoustical Society of America*, 125, 3983-3994. PMC2806435.

Leech, R., Holt, L. L., Devlin, J. T., Dick, F. (2009). **Expertise with artificial non-speech sounds recruits speech-sensitive cortical regions.** *Journal of Neuroscience*, 29, 5234 –5239. PMC2747609.

Lotto, A. J., Hickok, G. S., & Holt, L. L. (2009). **Reflections on mirror neurons and speech perception.** *Trends in Cognitive Science*, 13, 110-114, PMC2921844.

Hickok, G., Holt, L. L. & Lotto, A. J. (2009). **Response to Wilson: What does motor cortex contribute to speech perception?** *Trends in Cognitive Sciences*, 13, 330-331.

Mirman, D., McClelland, J. L., Holt, L. L., and Magnuson, J. S. (2008). **Effects of attention on the strength of lexical influences on speech perception: Behavioral experiments and computational mechanisms.** *Cognitive Science*, 32, 398-417. PMC2396758.

Holt, L. L. & Lotto, A. J. (2008). **Speech perception within an auditory cognitive science framework.** *Current Directions in Psychological Science*, 17, 42-46. PMC2593873.

Mirman, D., McClelland, J. L. & Holt, L. L. (2006). **An interactive Hebbian account of lexically guided tuning of speech perception.** *Psychonomic Bulletin and Review*, 13, 958-965. PMC2291357.

McClelland, J. L., Mirman, D., & Holt, L. L. (2006). **Are there interactive processes in speech perception?** *Trends in Cognitive Science*, 10, 363-369.

Mirman, D., McClelland, J. L., & Holt, L. L. (2006). **Response to McQueen et al.: Theoretical and empirical arguments support interactive processing.** *Trends in Cognitive Sciences*, 10, 534.

Lotto, A. J. & Holt, L. L. (2006). **Putting phonetic context effects into context: A commentary on Fowler (2005).** *Perception & Psychophysics*, 68, 178-183. PMC177095.

Holt, L. L. & Lotto, A. J. (2006). **Cue weighting in auditory categorization: Implications for first and second language acquisition.** *Journal of the Acoustical Society of America*, 119, 3059-3071.

Holt, L. L. (2006b). **The mean matters: Effects of statistically-defined non-speech spectral distributions on speech categorization.** *Journal of the Acoustical Society of America*, 120, 2801-2817. PMC1635014.

- Holt, L. L. (2006a). **Speech categorization in context: joint effects of non-speech and speech precursors.** *Journal of the Acoustical Society of America*, 119, 4016-4026. PMC1633715.
- Holt, L. L., Stephens, J. D. W., & Lotto, A. J. (2005). **A critical evaluation of visually-moderated phonetic context effects.** *Perception & Psychophysics*, 67, 1102-1112.
- Wade, T. & Holt, L. L. (2005c). **Perceptual effects of preceding non-speech rate on temporal properties of speech categories.** *Perception & Psychophysics*, 67, 939-950.
- Wade, T. & Holt, L. L. (2005b). **Incidental categorization of spectrally complex non-invariant auditory stimuli in a computer game task.** *Journal of the Acoustical Society of America*, 118, 2618-2633.
- Wade, T. & Holt, L. L. (2005a). **Effects of later-occurring non-linguistic sounds on speech categorization.** *Journal of the Acoustical Society of America*, 118, 1701-1710.
- Holt, L. L. (2005). **Temporally non-adjacent non-linguistic sounds affect speech categorization.** *Psychological Science*, 16, 305-312.
- Mirman, D., McClelland, J. M. & Holt, L. L. (2005). **Computational and behavioral investigations of lexically induced delays in phoneme recognition.** *Journal of Memory and Language*, 52, 424-443.
- Holt, L. L., Lotto, A. J. & Diehl, R. L. (2004). **Auditory discontinuities interact with categorization: Implications for speech perception.** *Journal of the Acoustical Society of America*, 116, 1763-1773.
- Mirman, D., Holt, L. L., & McClelland, J. M. (2004). **Categorization and discrimination of non-speech sounds: Differences between steady-state and rapidly-changing acoustic cues.** *Journal of the Acoustical Society of America*, 116, 1198-1207.
- Pollak, S. D., Holt, L. L., & Wismer Fries, A. B. (2004). **Hemispheric asymmetries in children's perception of human affective sounds.** *Developmental Science*, 7, 10-18.
- Diehl, R. L., Lotto, A. J. & Holt, L. L. (2004). **Speech perception.** *Annual Review of Psychology*, 55, 149-179.
- Stephens, J. D. & Holt, L. L. (2003). **Preceding phonetic context affects perception of non-speech.** *Journal of the Acoustical Society of America*, 114, 3036-3039.
- Lotto, A. J., Sullivan, S. C., & Holt, L. L. (2003). **Central locus for non-speech effects on phonetic identification.** *Journal of the Acoustical Society of America*, 113, 53-56.

Holt, L. L. & Lotto, A. J. (2002). **Behavioral examinations of the neural mechanisms of speech context effects.** *Hearing Research*, 167, 156-169.

Holt, L. L., Lotto, A. J., & Kluender, K. R. (2001). **Influence of fundamental frequency on stop-consonant voicing perception: A case of learned covariation or auditory enhancement?** *Journal of the Acoustical Society of America*, 109, 764-774.

Holt, L. L. & Kluender, K. R. (2000). **General auditory processes contribute to perceptual accommodation of coarticulation.** *Phonetica*, 57, 170-180.

Holt, L. L., Lotto, A. J., & Kluender, K. R. (2000). **Neighboring spectral content influences vowel identification.** *Journal of the Acoustical Society of America*, 108, 710-722.

Kluender, K. R., Lotto, A. J., Holt, L. L., & Bloedel, S. B. (1998). **Role of experience in language-specific functional mappings for vowel sounds as inferred from human, nonhuman, and computational models.** *Journal of the Acoustical Society of America*, 104, 3568-3582.

Lotto, A. J., Kluender, K. R., & Holt, L. L. (1998). **Depolarizing the perceptual magnet effect.** *Journal of the Acoustical Society of America*, 103, 3648-3655.

Lotto, A. J., Kluender, K. R., & Holt, L. L. (1997b). **Effect of voice quality on perceived height of English vowels.** *Phonetica*, 54, 76-93.

Lotto, A. J., Kluender, K. R., & Holt, L. L. (1997a). **Perceptual compensation for coarticulation by Japanese quail (*Coturnix coturnix japonica*).** *Journal of the Acoustical Society of America*, 102, 1134-1140.

## CHAPTERS and PROCEEDINGS PAPERS

Weiner, S., Murphy, T., Christel, M., Goel, A., & Holt, L. L. (2019). Incidental learning of non-speech auditory analogs scaffolds second language learners' perception and production of Mandarin lexical tones. ICPhS.

Sharma, N., Ganesh, S., Ganapathy, S. & Holt, L. L. (2019). Analyzing human reaction time for talker change detection. ICASSP.

Holt, L. L., Roark, C. L., Lehet, M. I., & Dick, F. (2018). Drivers of incidental category learning. *Proceedings of the Cognitive Science Society*, Madison, 2018.

Wu, Y. C., & Holt, L. L. (2018). Phonetic category activation drives dimension-based adaptive tuning in speech perception. *Proceedings of the Cognitive Science Society*, Madison, 2018.

Gabay, Y., Karni, A., & Holt, L. L. (2018). Consolidation and retention of auditory categories acquired incidentally in performing a visuomotor task. *Proceedings of the Cognitive Science Society*, Madison, 2018.

- Holt, L. L. & Idemaru, K. (2015). Generalization of dimension-based statistical learning: context matters. *Proceedings of the International Congress of Phonetic Sciences*, Glasgow, 2015.
- Kimball, G., Cano, R., Feng, J., Feng, L., Hampson, E., Li, E., Christel, M. G., Holt, L. L., Lim, S.-J., Liu, R., Lehet, M. (2013). Supporting research into sound and speech learning through a configurable computer game. *Proceedings of the IEEE Games Innovation Conference (IGIC)*, Vancouver, 2013.
- Holt, L. L. & Idemaru, K. (2011). Generalization of dimension-based statistical learning. *Proceedings of the International Congress of Phonetic Sciences*, Hong Kong, 2011.
- Idemaru, K. & Holt, L. L. (2011). Production and perception of English /l/ and /r/ by 4-, 5- and 8-year-old children. *Proceedings of the International Congress of Phonetic Sciences*, Hong Kong, 2011.
- Ingvalson, E. & Holt, L. L. (2011). Perception-production relationships for /r-l/ by native Japanese speakers. *Proceedings of the International Congress of Phonetic Sciences*, Hong Kong, 2011.
- Holt, L. L. (2011). How perceptual and cognitive constraints affect learning of speech categories. In Abigail Cohn, Cécile Fougerson and Marie Huffman (Eds.), *Handbook of Laboratory Phonology*, Oxford University Press.
- Lotto, A. J. & Holt, L. L. (2010). Psychology of auditory perception. *Wiley Interdisciplinary Reviews: Cognitive Science*, pp. 1939-5086. John Wiley & Sons, Inc. DOI: 10.1002/wcs.123
- Holt, L. L. & Idemaru, K. (2010). Speech Perception. In Irving B. Weiner & W. Edward Craighead, (Eds.), *Corsini's Encyclopedia of Psychology*, Fourth Edition. Wiley.
- Holt, L. L. (2010). Psychophysics of Speech. In P. Hogan, (Ed.), *Cambridge Encyclopedia of the Language Sciences*. University of Connecticut.
- Holt, L. L. (2008). Speech Perception: Adult. In Larry R. Squire, Editor-In-Chief, *Encyclopedia of Neuroscience*, Vol. 9, Academic Press, Oxford, pp. 219-226.
- Idemaru, K. & Holt, L. L. (2007). Relational timing or absolute duration? Cue weighting in the perception of Japanese singleton-geminate stops. *International Congress of Phonetic Sciences 2007*.
- Mirman, D., McClelland, J. L., & Holt, L. L. (2006). Attentional modulation of lexical effects on speech perception: Computational and behavioral experiments. *Proceedings of the 28th Annual Conference of the Cognitive Science Society*.



Kluender, K. R., Lotto, A. J., & Holt, L. L. (2005). Contributions of nonhuman animal models to understanding human speech perception. In S. Greenberg and W. Ainsworth (Eds.) *Listening to Speech: An Auditory Perspective*, Oxford University Press: New York, NY.

Lacerda, F., Sundberg, U., Carlson, R. & Holt, L. L. (2004). Modeling interactive language learning: Project presentation. *Proceedings of FONETIK 2004*.

Holt, L. L. & Wade, T. (2004). Non-linguistic sentence-length precursors affect speech perception: implications for speaker and rate normalization. *Proceedings of From Sound to Sense: Fifty+ Years of Discoveries in Speech Communication*.

Lotto, A. J., & Holt, L. L. (2000). The illusion of the phoneme. In S. J. Billings, J. P. Boyle, & A. M. Griffith (Eds.), *Chicago Linguistic Society, Volume 35: The Panels*. Chicago: Chicago Linguistic Society, 191-204.

Lotto, A.J., Kluender, K.R., & Holt, L.L. (2000). Effects of language experience on perceptual organization of vowel sounds. In M. Broe & J. Pierrehumbert (Eds.), *Laboratory Phonology V: Language Acquisition and the Lexicon*, pp. 219-228, Cambridge University Press: Cambridge.

Holt, L. L., Lotto, A. J., & Kluender, K. R. (1998). Incorporating principles of general learning in theories of language acquisition. In M. Gruber, C. Derrick Higgins, K. S. Olson & T. Wysocki (Eds.), *Chicago Linguistic Society, Volume 34: The Panels*. Chicago: Chicago Linguistic Society, 253-268.

Lotto, A. J., Kluender, K. R., & Holt, L. L. (1997). Animal models of speech perception phenomena. In K. Singer, R. Eggert, & G. Anderson (Eds.), *Chicago Linguistic Society, Volume 33*, 357-367, Chicago Linguistic Society: Chicago, IL.

Kluender, K. R., Lotto, A. J., & Holt, L. L. (1995). Effect of voice quality on the tense/lax distinction for English vowels. *Proceedings of the International Congress of Phonetic Sciences*, 4, 164-167.

**CONFERENCES  
& INVITED  
PRESENTATIONS**

Holt, L. L. Interdisciplinary Advances in Statistical Learning, San Sebastian, Spain. June 2019. Keynote.

Holt, L. L. Baylor University. May 2019.

Sharma, N., Ganesh, S., Ganapathy, S. & Holt, L. L. Analyzing human reaction time for talker change detection. International Conference on Acoustics and Signal Processing, IEEE Signal Processing Society. Brighton, UK. May 2019.

Burkinshaw, K., Curtin, S., & Holt, L. L. Vowel space and variability in infant- and adult-directed speech. 177<sup>th</sup> Meeting of the Acoustical Society of America, Louisville, KY. May, 2019.

Nissan, N., Holt, L. L., Karni, A. & Gabay, Y. The development of incidental auditory category learning. International Convention of Psychological Science (ICPS), Paris, March 2019.

Nissan, N., Holt, L. L., Karni, A. & Gabay, Y. The development of incidental auditory category learning. The 6<sup>th</sup> conference on Cognition Research of the Israeli Society of Cognitive Psychology, Akko, Israel, February 2019.

Sharma, N., Ganapathy, S., Ganesh, S. & Holt, L. L. Talker Change Detection: A comparison of human and machine performance. Association for Research in Otolaryngology. February, 2019.

Wu, Y. & Holt, L. L. Behavioral and electrophysiological evidence of incidental learning across continuous speech. Association for Research in Otolaryngology. February, 2019. (selected for podium presentation)

Holt, L. L. Understanding how humans interpret the complexity of spoken language. Winter School on Speech and Audio Processing (WiSSAP). College of Engineering, Trivandrum, Kerala, India. January 2019.

Holt, L. L. Understanding how humans interpret the complexity of spoken language. Indian Institute of Science. Bangalore, India. January 2019.

Holt, L. L. Statistical Learning Workshop. Yale University and Haskins Laboratories. December 2018.

Wu, Y., Liu, R., Lim, S-J., & Holt, L.L. Behavioral and electrophysiological evidence of incidental learning across continuous speech. Advances and Perspectives in Auditory Neuroscience, November 2018. (Recognized with a Poster Teaser Award).

Chrabaszcz A., Neumann J., Stretcu O., Lipski W., Bush A., Dastolfo-Hromack C., Wang D., Crammond D.J., Shaiman S., Dickey M.W., Holt L.L., Turner R.S., Fiez J.A., Richardson R.M. Cortical and subcortical representations of consonant articulatory features. Society for Neuroscience, November 2018.

Dastolfo-Hromack C (co-first author), Alhourani A (co-first author), Lipski W, Crammond DJ, Shaiman S, Dickey MW, Holt LL, Turner RS, Fiez JA, Richardson RM Neural oscillations in the human subthalamic nucleus predict scaling of speech production. Society for Neuroscience, November 2018.

Wu, Y., Liu, R., Lim, S-J., & Holt, L.L. Behavioral and electrophysiological evidence of incidental learning across continuous speech. Society for Neuroscience, November 2018. (Recognized with a digital poster presentation).

Roark, C. L., Lehet, M. I., Dick, F., & Holt, L. L. Factors influencing incidental category learning. 2018 Annual Meeting of the Psychonomics Society, New Orleans, LA, November 2018.

Holt, L. L. Using speech to listen in on auditory learning. Invited talk at the University of Southern California, October 2018.

Holt, L. L. Incidental learning. Invited talk at the PDP Symposium. Princeton, September 2018.

Roark, C. & Holt, L. L. Development of information-integration auditory category learning. 40<sup>th</sup> Annual Meeting of the Cognitive Science Society, Madison, WI. July 2018.

Wu, Y., & Holt, L. L. Phonetic category activation drives dimension-based adaptive tuning in speech perception. 40<sup>th</sup> Annual Meeting of the Cognitive Science Society, Madison, WI. July 2018.

Holt, L. L., Roark, C. L., Lehet, M. I., & Dick, F. Drivers of incidental category learning. 40<sup>th</sup> Annual Meeting of the Cognitive Science Society, Madison, WI. July 2018.

Gabay, Y., Karni, A., & Holt, L. L. Consolidation and retention of auditory categories acquired incidentally in performing a visuomotor task. 40<sup>th</sup> Annual Meeting of the Cognitive Science Society, Madison, WI. July 2018.

Wu, Y., & Holt, L. L. Behavioral and electrophysiological evidence of incidental learning, generalization and retention of speech categories from continuous speech. 175<sup>th</sup> Meeting of the Acoustical Society of America, Minneapolis, MN, May 2018.

Holt, L. L. The life and times of Randy Diehl. Diehl-a-palooza. Austin, TX, April 2018.

Roark, C. & Holt, L. L. Reward history associated with acoustic dimensions impacts auditory category learning. 58<sup>th</sup> Annual Meeting of the Psychonomic Society, Vancouver, CA. November 2017.

Lipski WJ, Alhourani A, Pirnia T, Jones PW, Dastolfo-Hromack C, Helou LB, Crammond DJ, Shaiman S, Dickey MW, Holt LL, Litman D, Turner RS, Fiez JA, Richardson RM. Speech encoding in the human subthalamic nucleus. Society for Neuroscience, Washington, DC. November 2017.

Holt, L. L. Incidental auditory category learning. International Conference on Auditory Cortex, Banff, Canada. September, 2017.

Dick, F. K., Lehet, M. I., Callaghan, M. F., Keller, T. A., Sereno, M. I. & Holt, L. L. Spectrally-directed attention in human auditory cortex is topographically organized and related to myeloarchitecture. International Conference on Auditory Cortex, Banff, Canada. September, 2017.

Holt, L. L., Mukundan, R., Kim, Na-Yeon, Christel, M., Dick, F., Shinn-Cunningham, B., Tager-Flusberg, H. Training Auditory Attention with Engaging Online Games. The 2017 Games for Change Festival, New York, July 2017.

Holt, L. L. Stability and plasticity in speech perception. University of Oregon, Department of Linguistics Colloquium, May 2017.

Holt, L. L. Using speech to listen in on auditory learning. University of Oregon, Neuroscience Institute Colloquium, May 2017.

Holt, L. L. Listening in on auditory learning. Johns Hopkins University, Baltimore, April 2017.

Holt, L. L. Using speech to listen in on auditory learning. Carnegie Mellon University, Pittsburgh, PA, April 2017.

Holt, L. L. Using speech to listen in on auditory learning. Washington University, St. Louis, Missouri, April 2017.

Burkinshaw, K., Curtin, S., & Holt, L. L. Speech sound variability and infant speech perception. 35th West Coast Conference on Formal Linguistics (WCCFL), University of Calgary, April 2017.

Holt, L. L. Using speech to listen in on auditory processing. Distinguished Lecture Series, Harvard-MIT, Boston, MA, March 2017.

Gabay, Y., & Holt, L. L. (March, 2017). Online Perceptual Learning across Distorted Speech Input is Disrupted in Developmental Dyslexia. Research Workshop of the Israeli Science Foundation on Procedural and Declarative Memory, Language Acquisition, and Cognitive Processes: Developmental Trajectories and Impairments in Monolingual and Bilingual Children, Bar-Ilan, Ramat-Gan, Israel. March, 2017.

Holt, L. L. Using speech to listen in on auditory processing. University of Pittsburgh Communications Disorders Reading Group, March 2017.

Wu, Y. & Holt L. L. Error-driven learning in online speech perception. Association for Research in Otolaryngology, Baltimore, MD, February 2017.

Holt, L. L. rapid learning updates the mapping of input to auditory objects according to short-term input statistics. Association for Research in Otolaryngology, Baltimore, MD, February 2017.

Holt, L. L. It's Always Sunny In Gainesville: Dyslexia and Probabilistic Category Learning. Auditory Cognitive Neuroscience Society, Gainesville, FL., January 2017.

Holt, L. L. Auditory learning in an 'alien world.' University of Wisconsin, Madison, WI. November 2016.

Holt, L. L. Auditory learning in an 'alien world.' University of Pittsburgh, Pittsburgh, PA. October 2016.

Holt, L. L. Speech Perception. Center for Hearing Research 11<sup>th</sup> Annual Research Symposium, *From Sound to Comprehension: How We Make Use of Acoustic Information to Understand Speech and other Natural Sounds*. University of California-Irvine. May 2016. (Keynote)

Holt, L. L. Sticking it to Vision. Auditory Cognitive Neuroscience Society, Tucson, AZ, January 2016.

Roark, C.L. & Holt, L. L. The role of perceptual dimensions in auditory category learning. 56<sup>th</sup> Annual Meeting of the Psychonomics Society, Chicago, IL. November 2015.

Holt, L. L. Using speech to listen in on auditory learning. Center for Perceptual Sciences Colloquium, University of Texas-Austin. Austin, TX, November 2015.

Dick, F.K., Lehet, M., & Holt, L. L. Topographic representation of frequency-selective attention in human auditory cortex. Podium Presentation. Society for Neuroscience, Chicago, IL, October 2015.

Holt, L. L. Incidental auditory category learning. Invited podium contribution in Minisymposium. Society for Neuroscience, Chicago, IL, October 2015.

Dick, F.K., Lehet, M., & Holt, L. L. Topographic representation of frequency-selective attention in human auditory cortex. *Advances and Perspectives in Auditory Neuroscience*, Chicago, IL, October 2015.

Roark, C.L. & Holt, L. L. Effects of extended training on an incidental auditory category learning task. Society for the Neurobiology of Language, Chicago, IL, October 2015.

Dick, F. K., Lehet, M., & Holt, L.L. Topographic representation of frequency-selective attention in human auditory cortex. Society for the Neurobiology of Language, Chicago, IL, October 2015.

Holt, L. L. & Idemaru, K. (2015). Generalization of dimension-based statistical learning: context matters. *Proceedings of the International Congress of Phonetic Sciences*, Glasgow, 2015.

Holt, L.L. Learning foreign sounds in an alien world. Neural processing in humans, animals and machines (NeuroHAM). Boston University, Center of Excellence for Learning in Education, Science and Technology. June 2015.

Liu, R. & Holt, L. L. Perceptual scaffolding of non-native speech categories through videogame-based training. 169th Meeting of the Acoustical Society of America, Pittsburgh, PA. May 2015.

Roark, C. & Holt, L. L. Rule-based and information-integration categorization during an incidental learning task. 169th Meeting of the Acoustical Society of America, Pittsburgh, PA. May 2015.

Holt, L. L., Gabay, Y., Zevin, J. D., & Dick, F. Incidental auditory category learning. 169th Meeting of the Acoustical Society of America, Pittsburgh, PA. May 2015.

Lehet, M. & Holt, L. L. Adaptation to accent affects categorization, but not basic perceptual representation. 169th Meeting of the Acoustical Society of America, Pittsburgh, PA. May 2015.

Holt, L.L. Auditory cognitive neuroscience as a tool for understanding phonetic perception. Chicago Linguistic Society. Invited speaker. April 2015.

Holt, L.L. Using speech perception to listen in on auditory learning. University of Pittsburgh Medical Center, Grand Rounds. April 2015.

Holt, L. L. What speech reveals about how the auditory processing. University of Pittsburgh, Department of Neurobiology. March 2015.

Holt, L. L. Our Tootsie Pop Problem. Auditory Cognitive Neuroscience Society, Tucson, AZ, January 2015.

Holt, L. L. Learning in an alien world. Multisensory Summit, Boston University, December 2014.

Lim, S. -J., Lotto, A. J., Obleser, J., & Holt, L. L. The development of internal representations of sound categories. Society for the Neurobiology of Language, Amsterdam, August 2014.

Gabay, Y., Schiff, R., Vakil, E., & Holt, L. L. Impaired probabilistic learning mechanisms in developmental dyslexia. International Neuropsychological Society, Jerusalem, Israel 2014.

Holt, L. L. Speech, melodies and invaders from space: What speech reveals about how the auditory system uses the past to interpret the present. Sensory processing: how the past affects the present. In the series *New Ideas in Hearing* of the Institut d'Etude de la Cognition, Paris, November 2013.

Lim, S-J., Fiez, J.A., & Holt, L. L. Investigating the role of speech-selective regions during videogame-based non-speech sound category acquisition, Society for the Neurobiology of Language, San Diego, CA, November 2013.

Lim, S-J., Holt, L. L., & Fiez, J.A. Context-dependent modulation of striatal systems during incidental auditory category learning. Society for Neuroscience, San Diego, CA, November 2013.

Lehet, M.I., Ly, M. & Holt, L. L. Short-term input regularities impact cue weighting in speech perception and production. Annual Meeting of the Psychonomic Society, Toronto, Ontario, November 2013.

Holt, L. L. Using speech perception to listen in on auditory learning. Invited colloquium at the University of Rochester, October 2013.

Gabay, Y., Dick, F., K., Zevin, J. D., & Holt, L. L. Procedural learning of auditory categories: New evidence from an implicit measure, 20<sup>th</sup> Anniversary Meeting of the Cognitive Neuroscience Society, San Francisco, CA, April 2013.

Lim, S-J., Fiez, J. A., Wheeler, M. E., & Holt, L. L. Investigating the neural basis of video-game-based category learning. 20<sup>th</sup> Anniversary Meeting of the Cognitive Neuroscience Society, San Francisco, CA, April 2013.

Holt, L. L. Learning foreign sounds in an alien world. Auditory Cognitive Neuroscience Society, Tucson, AZ, January 2013.

Idemaru, K. & Holt, L. L. Examining Talker and Phoneme Generalization of Dimension-based Statistical Learning in Speech Perception. SST 2012, 14th Australasian International Conference on Speech Science and Technology. Sydney, Australia, December 2012.

Reinisch, E. & Holt, L. L. Lexically guided category retuning affects low-level acoustic processing. 164th Meeting of the Acoustical Society of America, Kansas City, Missouri, October 2012.

Reinisch, E. & Holt, L. L. Influence of lexical and acoustic context on phonetic categorization depends on listening situation. 164th Meeting of the Acoustical Society of America, Kansas City, Missouri, October 2012.

Reinisch, E. & Holt, L. L. Listening situation modulates lexical and acoustic context effects in phonetic categorization, 2012 Psychonomic Society Annual Meeting, Minneapolis, MN, November 2012.

Holt, L. L., Lim, S-J., & Liu, R. Learning foreign sounds in an alien world. Invited presentation in the L2 Speech Perception in Richly Informative Environments symposium, Second Language Research Forum: Building Bridges Between Disciplines, SLA in Many Contexts, October 2012.

Idemaru, K., Holt, L. L. & Kapatsinski, V. The time-course of dimension-based statistical learning. Architectures and Mechanisms for Language Processing. Riva del Garda, Italy, September 2012.

Curtin, S., Holt, L., Murphy, A., Hufnagle, D.G. Comparing distributional regularities in speech directed to infants and adults. Talk delivered in the symposium on Mapping the acoustic landscape of IDS: What are its implications for learning? At the International Conference for Infant Research (ICIS), Minneapolis, Minnesota, June 2012.

Holt, L. L. Learning foreign sounds in an alien world. Invited colloquium at the University of Chicago, May, 2012.

Holt, L. L. Using speech to listen in on auditory processing. Invited speaker at the Sixteenth International Conference on Cognitive and Neural Systems, Boston University, May, 2012.

Holt, L. L. Using speech to listen in on auditory processing. Invited colloquium at the University of Maryland. March, 2012.

Holt, L. L. Dimension-based statistical learning and generalization. Auditory Cognitive Neuroscience Society, Tucson, AZ, January 2012.

Huang, J. & Holt, L. L. Acoustic similarity influences the "phonological similarity" effect. Annual Meeting of the Psychonomic Society, Seattle, Washington, November 2011.

Holt, L. L. Using speech to listen in on auditory processing. Annual Retreat, Center for the Neural Basis of Cognition, October 2011.

Holt, L. L. How the challenges of speech perception can inspire investigations of general auditory learning. European Society for Cognitive Psychology, San Sebastian, Spain, October, 2011.

Holt, L. L. Understanding the role of experience in speech perception. First International Conference on Cognitive Hearing Science for Communication. Linköping, Sweden, June 2011.



Liu, R., Soh, H. & Holt, L. L. Cue weighting for speech categorization changes based on regularities in short-term speech input. 161st Meeting of the Acoustical Society of America, Seattle, Washington, May 2011.

Huang, J. Holt, L. L., & Lotto, A. J. Long term average spectrum predicts accent normalization. 161st Meeting of the Acoustical Society of America, Seattle, Washington, May 2011.

Lim, S., Holt, L. L., & Lacerda, F. Learning acoustically complex wordlike units within a videogame training paradigm. 161st Meeting of the Acoustical Society of America, Seattle, Washington, May 2011.

Holt, L. L. Speech processing in a general framework. Biological Rhythms of Cortical Computation, New York University, May 2011.

Holt, L. L. The formation and tuning of auditory categories. McGill University, May 2011.

Holt, L. L. The formation and tuning of auditory categories. Boston University, April 2011.

Hufnagle, D. & Holt, L. L. Development of adult-like speech categorization in 3- to 5-year olds. Boston University Conference on Language Development. Boston, MA, November 2010.

Holt, L. L. Auditory Categorization. 4<sup>th</sup> Annual Meeting of the Auditory Cognitive Neuroscience Society, Tucson, AZ, January 2010.

Wood, T., Leech, R., Apel, T., Holt, L. L. & Dick, F. Changes in fMRI activation after naturalistic training on ringtone stimuli. Society for Neuroscience 2009 Annual Meeting, Chicago, IL, October 2009.

Guediche, S. A., Holt, L. L. & Fiez, J. A. Examining the neural basis of adaptation in speech perception without feedback. Society for Neuroscience 2009 Annual Meeting, Chicago, IL, October 2009.

Idemaru, K. & Holt, L. L. Production and Perception of English /l/ and /r/ by Native-Speaking Children. 158<sup>th</sup> Meeting of the Acoustical Society of America, San Antonio, TX, October 2009.

Huang, J., Lotto, A. J., & Holt, L. L. Effect of a Spoken Passage's Long-term Average Spectrum on Subsequent Speech Categorization. 158<sup>th</sup> Meeting of the Acoustical Society of America, San Antonio, TX, October 2009.

Lim, S. & Holt, L. L. Sensitivity to the distributional structure of auditory categories. 158<sup>th</sup> Meeting of the Acoustical Society of America, San Antonio, TX, October 2009.

Laing, E., Holt, L. L., & Bagic, A. Investigation of the Neural Bases of Context-Dependent Speech Categorization. 158<sup>th</sup> Meeting of the Acoustical Society of America, San Antonio, TX, October 2009.

Guediche, S. A., Fiez, J. A., & Holt, L. L. Perceptual learning of distorted speech with and without feedback, The Annual Meeting of the Cognitive Science Society, Amsterdam, July 2009.

Lim, S. & Holt, L. L. Investigating non-native category learning using a video-game-based training paradigm. 157<sup>th</sup> Meeting of the Acoustical Society of America, Portland, OR, May 2009.

Idemaru, K. & Holt, L. L. Measuring sensitivity to short-term deviations in acoustic cue correlation. 157<sup>th</sup> Meeting of the Acoustical Society of America, Portland, OR, May 2009.

Holt, L. L. The adaptive plasticity of speech perception. 3<sup>rd</sup> Annual Meeting of the Auditory Cognitive Neuroscience Society, Tucson, AZ, January 2009.

Holt, L. L. Twitters, gerbils and invaders from space: Speech categorization within an auditory cognitive science framework. Winter Conference on Issues in Developmental Psychobiology. St. Croix, U.S.V.I, January 2009.

Liu, R. & Holt, L. L. Effects of short-term experience on auditory categorization: An event-related potential study. 38<sup>th</sup> Annual Meeting of the Society for Neuroscience. Washington, DC, November, 2008.

Lim, S. J. & Holt, L. L. Learning Non-Native Speech Categories with a Video Game. 49<sup>th</sup> Annual Meeting of the Psychonomic Society. Chicago, IL, November 2008.

Idemaru, K. & Holt, L. L. Re-tuning Speech Sound Categories: An Eyetracking Study. 156<sup>th</sup> Meeting of the Acoustical Society of America, Miami, FL, November, 2008.

Huang, J. & Holt, L. L. Investigating the Influence of Context Frequency on Lexical Tone Perception. 156<sup>th</sup> Meeting of the Acoustical Society of America, Miami, FL, November, 2008.

Taylor, E. Holt, L.L. and Bagic, A. A MEG study of the neural basis of context-dependent speech categorization. International Conference on Biomagnetism, BIOMAG 2008, Sapporo, Japan, August, 2008. [Young Investigator Award awarded to Ms. Taylor].

Hufnagle, D., Curtin, S., Holt, L. L. & Keisling, S. L. 6-Month Olds are More Sensitive to Variations in F1 than F2 in Vowels. Workshop on Linguistic Variation Across the Lifespan. Columbus, OH. May, 2008.

Leech, R., Holt, L., Devlin, J. & Dick, F. Changes in functional organization following naturalistic training on complex auditory categories, 15th Annual Cognitive Neuroscience Meeting, San Francisco, CA, April, 2008.

Hufnagle, D., Curtin, S., Holt, L. L. & Keisling, S. L. 6-Month Olds are More Sensitive to Variations in F1 than F2 in Vowels. The XVIth Conference on Infant Studies. Vancouver, Canada. March, 2008.

Holt, L. L. Speech, melodies and invaders from space: Speech perception within a general auditory cognitive science framework. Invited colloquium. Rutgers University Department of Psychology, March, 2008.

Holt, L. L. Speech, melodies and invaders from space: Speech perception within a general auditory cognitive science framework. Invited colloquium. Brown University Department of Cognitive and Linguistic Sciences, February, 2008.

Holt, L. L. Cue weighting in speech categorization. 2<sup>nd</sup> Annual Meeting of the Auditory Cognitive Science Society, Tucson, AZ, January, 2008.

Holt, L. L. Mirror neurons, myths and the motor theory of speech perception. 2<sup>nd</sup> Annual Meeting of the Auditory Cognitive Science Society, Tucson, AZ, January, 2008.

Holt, L. L. Determinants of auditory cue weighting and selective attention. 154<sup>th</sup> Meeting of the Acoustical Society of America, New Orleans, LA, November, 2007.

Ingvalson, E. M., McClelland, J. M., & Holt, L. L. Years of exposure to English predicts perception and production of /r/ and /l/ by native speakers of Japanese. 48<sup>th</sup> Annual Meeting of the Psychonomics Society, Long Beach, CA, November, 2007.

Idemaru, K. & Holt, L. L. Relational timing or absolute duration? Cue weighting in the perception of Japanese singleton-geminate stops. International Congress of Phonetic Sciences 2007, Saarbrücken, Germany, August, 2007.

Holt, L. L. Statistical perception: effects of acoustic regularity in online perception. Workshop on Current Issues in Language Acquisition: Artificial and Statistical Language Learning. Calgary, Alberta, June, 2007.

Holt, L. L. Speech perception cognition. Inaugural Meeting of the Auditory Cognitive Science Society, January, 2007.

Smith, E. and Holt, L. A theoretical model of cochlear processing improves simulated cochlear implant hearing. Computational and Systems Neuroscience, Salt Lake City, UT, 2006

Holt, L. L. Auditory categorization: What general learning can teach us about language development, Invited address to the New York Academy of Sciences,

Learning to Hear: Animal, Computational, and Neuroimaging Studies of Language Development, October, 2006.

Holt, L. L. Speech as a window to the auditory system. Center for the Neural Basis of Cognition Retreat, October, 2006.

Holt, L. L. Decisions and interactivity in perceiving speech. Invited talk, Department of Social and Decision Sciences, Carnegie Mellon University, September 2006.

Holt, L. L. Cracking the speech code. Invited talk, James S. McDonnell Foundation 21<sup>st</sup> Century Science Initiative Program Meeting, Palisades, New York, June 2006.

Holt, L. L. Auditory categorization and tuning in speech perception. Center for Visual Sciences Symposium on Statistical Learning and Brain Plasticity, University of Rochester, Invited Speaker, June, 2006.

Stephens, J. D. W., & Holt, L. L. Experience-driven effects of visual cues in speech perception. 151<sup>st</sup> Meeting of the Acoustical Society of America, Providence, Rhode Island, June 2006.

Smith, E. C. & Holt, L. L. A theoretical model of cochlear processing improves spectrally degraded speech perception. 151<sup>st</sup> Meeting of the Acoustical Society of America, Providence, Rhode Island, June 2006.

Holt, L. L. The formation and tuning of auditory categories. Invited colloquium, University of Texas – Dallas, April, 2006.

Holt, L. L. Speech, melodies and invaders from space: The formation and tuning of auditory categories. Interdisciplinary approaches to psycholinguistics and neurolinguistic research: Investigating speech perception and production, University of Southern California, February 2006.

Holt, L. L. Speech, melodies and invaders from space: The formation and tuning of auditory categories. Distinguished Speakers Series, Cornell University, November 2005.

Stephens, J.D.W., & Holt, L.L. Learned cross-modal integration of novel visual cues with auditory speech (poster). 46th Meeting of the Psychonomic Society, Toronto, ON, November 2005.

Ingvalson, E., Holt, L. L., & McClelland, J. L. Can F3 be used to teach Japanese adults /r/ and /l/? Cognitive Science Society, Stressa, Italy, August, 2005.

Holt, L. L. Formation and tuning of auditory and speech categories. Invited address McGill University, Montreal, Quebec, June 2005.

Hay, J., Holt, L. L., Lotto, A. J., & Diehl, R. L. How auditory discontinuities and linguistic experience affect the perception of speech and non-speech in English- and Spanish-speaking listeners. 149<sup>th</sup> Meeting of the Acoustical Society of America, Vancouver, BC, May 2005.

Holt, L. L. & Wade, T. Categorization of spectrally complex non-invariant auditory stimuli in a computer game task. 149<sup>th</sup> Meeting of the Acoustical Society of America, Vancouver, BC, May 2005.

Wade, T. & Holt, L. L. Perception of coarticulated speech with contrastively enhanced spectrotemporal patterns. 149<sup>th</sup> Meeting of the Acoustical Society of America, Vancouver, BC, May 2005.

Holt, L. L. & Wade, T. Incidental categorization of spectrally complex non-invariant auditory stimuli in a computer game task. Annual Meeting of the Cognitive Neuroscience Society, New York, NY, April 2005.

Stephens, J. D. W. & Holt, L. L. Experience-driven audio-visual integration in speech perception. Annual Meeting of the Cognitive Neuroscience Society, New York, NY, April 2005.

Wade, T. & Holt, L. L. Incidental complex auditory category learning in a computer game task. 28<sup>th</sup> Annual Midwinter Meeting of the Association for Research in Otolaryngology, New Orleans, LA, February, 2005.

Holt, L. L. & Lotto, A. J. Factors affecting perceptual weighting of acoustic cues in a categorization task. 28<sup>th</sup> Annual Midwinter Meeting of the Association for Research in Otolaryngology, New Orleans, LA, February, 2005.

Stephens, J. D. W., & Holt, L. L. Learning to integrate auditory and visual information in speech perception. 45<sup>th</sup> Annual Meeting of the Psychonomic Society, Minneapolis, MN, November, 2004.

Holt, L. L. & Lotto, A. J. Auditory categorization: cue weighting and dimension bias. 148<sup>th</sup> Meeting of the Acoustical Society of America, San Diego, CA, November, 2004.

Wade, T. & Holt, L. L. Contrastive backward effects of non-speech tones on speech perception. 148<sup>th</sup> Meeting of the Acoustical Society of America, San Diego, CA, November, 2004.

Holt, L. L. Name that tune: What speech categorization in context can tell us about auditory processing. Invited colloquium, Department of Physiology, University of Wisconsin-Madison, September 2004.

Holt, L. L. Auditory categorization: What general learning principles can tell us about speech categories. Invited colloquium, Kungliga Tekniska Högskolan (KTH, Swedish Royal Institute of Technology), Stockholm, Sweden, August, 2004.

Mirman, D., McClelland, J. M., & Holt, L. L. Attentional modulation of lexical effects in an interactive model of speech perception. 26<sup>th</sup> Annual Meeting of the Cognitive Science Society, Chicago, IL, August, 2004.

Holt, L. L. & Wade, T. Non-linguistic sentence-length precursors affect speech perception: Implications for speaker and rate normalization. From Sound to Sense: Fifty+ Years of Discoveries in Speech Communication, Massachusetts Institute of Technology, June 2004.

Wade, T. & Holt, L. L. Perceptual effects of preceding non-speech rate information on temporal properties of speech categories. 147<sup>th</sup> Meeting of the Acoustical Society of America, New York, NY, May 2004.

Holt, L. L. & Wade, T. Perception of correlations between acoustic cues in category tuning and speaker adaptation. 147<sup>th</sup> Meeting of the Acoustical Society of America, New York, NY, May 2004.

Holt, L. L. Context effects in speech perception. Invited colloquium, Massachusetts Institute of Technology, April 2004.

Holt, L. L. Context effects in speech perception. Invited colloquium, Lehigh University, April 2004.

Holt, L. L. and Lotto, A. J. Temporally non-adjacent acoustic histories shift identification of speech. Mid-Winter Meeting of the Association for Research in Otolaryngology, Daytona Beach, Florida, February 2004.

Holt, L. L. Context effects in speech perception: The long and the short of it. Invited colloquium, University of Stockholm, Department of Linguistics, February 2004.  
Holt, L. L. What are the 'statistics' in statistical learning? 146<sup>th</sup> Meeting of the Acoustical Society of America, Austin, TX, November 2003.

Ingvalson, E. M., Holt, L. L. & McClelland, J. M. Generalization in Japanese /r/ - /l/ perception: Shining a light on the right cue. 44<sup>th</sup> Annual Meeting of the Psychonomic Society, Vancouver, BC, November 2003.

Holt, L. L. Context effects in speech perception: The long and the short of it. Colloquium addressed to the Department of Psychology at the University of Texas-Austin, September 2003.

Holt, L. L. The role of experience in speech perception. James S. McDonnell Foundation Meeting of the 21<sup>st</sup> Century Scientists, June 2003.

Holt, L. L., Lotto, A. J., & Diehl, R. L. Perceptual discontinuities and categorization: Implications for speech perception. 145<sup>th</sup> Meeting of the Acoustical Society of America, Nashville, TN, April, 2003.

McClelland, J. L., Mirman, D. & Holt, Lori L. Is there still a trace of TRACE? 145<sup>th</sup> Meeting of the Acoustical Society of America, Nashville, TN, April, 2003. (invited contribution)

Holt, L. L., Lotto, A. J., Diehl, R. L. Perceptual discontinuities and categorization: Implications for speech perception. 10<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society. NY, NY, March, 2003.

Stephens, J. D. & Holt, L. L. Are context effects in speech perception modulated by visual information? 43<sup>rd</sup> Annual Meeting of the Psychonomic Society, Kansas City, MO, November, 2002.

Lotto, A. J. & Holt, L. L. Speech perception as a paradigmatic case of auditory cognition. 1<sup>st</sup> Annual Auditory Perception, Cognition, and Action Meeting, Kansas City, MO, November, 2002.

Holt, L. L. Perceptual context effects in speech perception. 14<sup>th</sup> Annual National Academy of Sciences Beckman Frontiers of Science Symposium, Los Angeles, CA, November, 2002.

Holt, L. L. Speech perception as complex auditory categorization. 143<sup>rd</sup> Meeting of the Acoustical Society of America, Pittsburgh, PA, June, 2002.

Mirman, D., Holt, L. L., McClelland, J. L. Formation of categories for complex novel auditory stimuli. 143<sup>rd</sup> Meeting of the Acoustical Society of America, Pittsburgh, PA, June, 2002.

Stephens, J. D., & Holt, L. L. Effect of preceding speech on nonspeech sound perception. 143<sup>rd</sup> Meeting of the Acoustical Society of America, Pittsburgh, PA, June, 2002.

Lotto, A. J., & Holt, L. L. Respective roles of spectral and phonemic representations in phonetic context effects. 13<sup>th</sup> Annual Meeting of the American Psychological Society, Toronto, CA, June 2001.

Holt, L. L., & Lotto, A. J. Auditory context effects for nonequivalent sources. 141<sup>st</sup> Meeting of the Acoustical Society of America, Chicago, IL, June, 2001.

Lotto, A. J. & Holt, L. L. Experimental paradigm for examining the formation of complex auditory categories. 141<sup>st</sup> Meeting of the Acoustical Society of America, Chicago, IL, June, 2001.

Holt, L. L. Listening to the animals: What nonhumans can tell us about speech perception. Language Technologies Institute, Department of Computer Science, Carnegie Mellon University, April 2001.

Holt, L. L. & Lotto, A. J. Perceptual context effects in speech perception. Cognitive Neuroscience Society, New York, NY, March 2001.

Holt, L. L. Maintaining perceptual constancy in speech. Invited colloquium to the Department of Communication Sciences and Disorders, University of Pittsburgh, March 2001.

Holt, L. L., Ventura, V., Rhode, W. R., Behesta, S., & Rinaldo, A. Context-dependent neural coding in the chinchilla cochlear nucleus. 140<sup>th</sup> Meeting of the Acoustical Society of America, Newport Beach, CA, December, 2000.

Kluender, K. R., Lotto, A. J., & Holt, L. L. (2000). Contributions of general auditory processes to perceptual accommodation of coarticulation. Invited address, The Nature of Speech Perception, Universiteit Utrecht, July 2000.

Holt, L. L. & Rhode, W. S. Examining context-dependent speech perception in the chinchilla cochlear nucleus. 23<sup>rd</sup> Midwinter Meeting of the Association for Research in Otolaryngology, February 22, 2000.

Holt, L. L., Lotto, A. J., & Kluender, K. R. Influence of fundamental frequency on stop-consonant voicing perception: A case of learned covariation or auditory enhancement? 138<sup>th</sup> Meeting of the Acoustical Society of America, Columbus, OH, November 4, 1999.

Lotto, A. J., Holt, L. L., & Kluender, K. R. Structure of phonetic categories produced by general learning mechanisms, 138<sup>th</sup> Meeting of the Acoustical Society of America, Columbus, OH, November 4, 1999.

Kluender, K. R. & Holt, L. L. General auditory processes contribute to perceptual accommodation of coarticulation. Invited address to the Speech Communication and Language Development Symposium, Stockholm, Sweden, June 17, 1999.

Holt, L.L. & Lotto, A. J. Simultaneous detection and identification of vowels: A case of unconscious perception? 71st Meeting of the Midwestern Psychological Association, Chicago, IL, April 29, 1999.

Lotto, A. J. & Holt, L. L. The illusion of the phoneme. Special Phonetics Panel (ChiPhon) of 35th Conference of the Chicago Linguistic Society, University of Chicago, April 23, 1999.



Holt, L. L., Lotto, A. J., & Kluender, K. R. Spectral contrast in the perception of VCV syllables. 136<sup>th</sup> Meeting of the Acoustical Society of America, Norfolk, Virginia, October 13, 1998.

Holt, L. L. The ABCs of effects of experience on infant speech perception. Address to Department of Physiology, University of Wisconsin, October, 1998.

Holt, L. L. Statistical learning of phonetic patterns. Address to Chaos and Complex Systems Seminar, University of Wisconsin, September, 1998.

Holt, L. L. Of context and cochlear nuclei: Encoding spectral contrast. Address to the Department of Neurophysiology, University of Wisconsin, March, 1998.

Kluender, K. R., Lotto, A. J., & Holt, L. L. Contributions of general auditory processes to perceptual accommodation of coarticulation. Institute of Linguistics, Stockholm University, Stockholm, Sweden, March, 1998, Invited colloquium.

Holt, L. L. Animal models of speech-sound acquisition. Address to the Department of Psychology, University of Wisconsin, February, 1998.

Holt, L. L., Kluender, K. R., & Lotto, A. J. Discrimination of single-formant stimuli by chinchillas (*Chinchilla villidera*). 134<sup>th</sup> Meeting of the Acoustical Society of America, San Diego, California, December, 1997.

Lotto, A. J., Holt, L. L., & Kluender, K. R. Perceptual magnet effect as categorical perception. 134<sup>th</sup> Meeting of the Acoustical Society of America, San Diego, California, December, 1997.

Holt, L. L. Context dependencies in perception. Invited address to the Department of Mechanical Engineering, University of Wisconsin, Robotics Research Seminar, June, 1997.

Lotto, A. J., Kluender, K. R., & Holt, L. L. Animal models of speech perception phenomena. Chicago Linguistics Society, Chicago, Illinois, April, 1997.

Holt, L. L. Does perceptual contrast neutralize coarticulatory assimilation? Address to the Department of Neurophysiology, University of Wisconsin, April, 1997.

Lotto, A. J., Kluender, K. R., & Holt, L. L. Context effects in speech perception by Japanese quail (*Coturnix japonica*). 20<sup>th</sup> Midwinter Meeting of the Association for Research in Otolaryngology (ARO), St. Petersburg Beach, Florida, February, 1997.

Lotto, A. J., Holt, L. L., & Kluender, K. R. General auditory processes may accommodate kinematic consequences of speech coarticulation. European Speech Communication Association Research Workshop on "The Auditory Basis of Speech Perception", Keele University, United Kingdom, July, 1996.

Kluender, K. R., Lotto, A. J., & Holt, L. L. Effects of language experience in perceptual organization for vowel sounds as inferred from human, nonhuman, and computational models. European Speech Communication Association Research Workshop on "The Auditory Basis of Speech Perception", Keele University, United Kingdom, July, 1996.

Lotto, A. J., Kluender, K. R., & Holt, L. L. Effects of language experience on perceptual organization of vowel sounds. Fifth Conference on Laboratory Phonology, Evanston, Illinois, July, 1996.

Lotto, A. J., & Holt, L. L. Auditory illusions and parlor tricks. Address to Department of Neurophysiology, University of Wisconsin, June, 1996.

Holt, L. L., Lotto, A. J., & Kluender, K. R. Perceptual compensation for vowel undershoot may be explained by general perceptual principles. 131<sup>st</sup> Meeting of the Acoustical Society of America, Indianapolis, Indiana, May, 1996.

Holt, L. L. Breathy female voice quality: Desirability or intelligibility? Address to Department of Psychology, University of Wisconsin, March, 1996.

Lotto, A. J., Kluender, K. R., & Holt, L. L. Animal and computational models of development of graded vowel categories. 130<sup>th</sup> Meeting of the Acoustical Society of America, St. Louis, Missouri, November, 1995.

Kluender, K. R., Lotto, A. J., & Holt, L. L. Effect of voice quality on the tense/lax distinction for English vowels. XIII<sup>th</sup> International Congress of Phonetic Sciences, Stockholm, Sweden, August, 1995, invited address.

Lotto, A. J., Kluender, K. R., & Holt, L. L. Spectral discontinuities and the vowel length effect. 128<sup>th</sup> Meeting of the Acoustical Society of America, Austin, Texas, November, 1994.

Holt, L. L., Lotto, A. J., & Kluender, K. R. Effect of voice quality on the tense/lax distinction for English vowels. 128<sup>th</sup> Meeting of the Acoustical Society of America, Austin, Texas, November, 1994.

## TEACHING

Music & Mind: The Cognitive Neuroscience of Sound

Spring '07; Fall '09;  
Spring '12, '15

Cognitive Research Methods

Spring '04-'06, '09-'11,  
Fall '18

The Discovery of Spoken Language

Spring '01-'03

Biological Foundations of Behavior	Fall '99-'06; '10-'11,'14, '16-'18
The Psychology and Neuroscience of Everyday Life	Spring '17-'18

## MENTORING

<b>Undergraduate Research Mentor</b> More than 45 students supervised in independent research. Eight undergraduate students presently training.	1999- present
<b>Dissertation Committee Chair</b> Dan Mirman (co-advisor with Jay McClelland) <i>Assistant Professor, Drexel University</i>	Ph.D. 2005
Joseph (Beau) D. W. Stephens <i>Associate Professor, North Carolina A&amp;T</i>	Ph.D. 2006
Erin Ingvalson (co-advisor with Jay McClelland) <i>Assistant Professor, Florida State University</i>	Ph.D. 2008
Erika Laing <i>PhD Student, University of Pittsburgh</i>	M.S. 2010
Jingyuan Huang <i>Senior Research Associate, Educational Testing Service</i>	Ph.D. 2012
Sung-joo Lim <i>Postdoctoral Researcher, Max Planck Institute; Boston University</i>	Ph.D. 2013
Ran Liu <i>Chief Data Scientist, MARI</i>	Ph.D. 2014
Matt Lehet, Ph.D. Student <i>Post-doctoral Research, University of Michigan</i>	Ph.D. 2017
Casey Roark, Ph.D. Student	Est. 2019
Charles Wu, Ph.D. Student	Est. 2020
Tim Murphy, Ph.D. Student	Est. 2023
<b>Dissertation Committee Member</b> Evan Smith (Vivienne Ming), CMU Psychology Brent Vander Wyk, CMU Psychology Christine Watson, CMU Psychology Sara Guediche, CNUP Alyx Kronstein, CMU Psychology	Ph.D. 2006 Ph.D. 2007 Ph.D. 2009 Ph.D. 2009 M.A. 2010

Chris Paynter, CMU Psychology	Ph.D. 2014
Caitlin Moyer, CNUP	Ph.D. 2013
Lindsay Victoria, CMU Psychology	Ph.D. 2012
Lucy Erickson, CMU Psychology	Ph.D. 2015
Xiaonan Liu, CMU Psychology	Ph.D. 2014
Sandrine Girard, CMU Psychology	Est. 2019
Emily Bond, CMU Psychology	Est. 2022
Pithculee Uayporn, University of Pittsburgh	Est. 2019
Matthew Boring	Est. 2020
<b>Outside Examiner</b>	
Efe Soyman (Dr. David Vicario, Committee Chair)	2017, Rutgers University
David Kleinschmidt (Dr. Florian Jaeger, Committee Chair)	2016, University of Rochester
Maria Kondaurova (Dr. Alex Francis, Committee Chair)	2008, Purdue University
Michelle Farmerie (Dr. Bill Langbauer, Committee Chair)	2008, George Washington University
Audny Dypvik (Dr. Suzanne Curtin, Committee Chair)	2007, University of Calgary
<b>Post-doctoral Supervisor</b>	
Dr. Travis Wade <i>Institute for Natural Language Processing at the University of Stuttgart; Posit Science</i>	2003-2005
Dr. Kaori Idemaru <i>Associate Professor, University of Oregon</i>	2006-2008
Dr. Daniel Hufnagle <i>Hufnagle Solutions, Inc.</i>	2008-2012
Dr. David Wozny <i>Automation Systems Engineer, Cook MyoSite</i>	2011-2012
Dr. Eva Reinisch <i>Ludwig Maxamillian University, Munich</i>	2011-2012
Dr. Yafit Gabay <i>Postdoctoral Research Fellow, University of Haifa</i>	2012-2014
Dr. Julia Zhang <i>Google</i>	2015-2016

Dr. Neeraj Sharma 2017-  
*Indian Institute of Science*

Dr. Mishaela DiNino 2018-

**INSTITUTIONAL  
SERVICE**

**Department of Psychology**

Strategic Planning Committee Chair 2017-  
Faculty Search Committee Chair 2017  
Zdrojkowski Search Committee Chair 2014, 2015  
Cognitive Area Faculty Search Committee 2003, 2004, 2006, 2008,  
2012, 2018  
Social Area Faculty Search Committee 2005, 2012  
Graduate Admissions/Visit Coordinator 2000-2006  
Undergraduate Research Award Committee 2000-2002  
Graduate Education Committee 2004-2015  
Promotion & Tenure Committees various  
Developmental Cognitive Neuroscience Search  
Committee 2013-2014  
Neuroscience Major Development Committee 2013  
Neuroscience Major Lead Advisor, Dietrich 2013-present

**Center for the Neural Basis of Cognition**

Executive Committee 2000-present  
Education Committee 2000-present  
Co-Director Search Committee 2006-2009  
University Advancement & Fundraising 2010-present  
Co-Director, B<sup>2</sup> Graduate Training Program 2007-present

**Carnegie Mellon University**

Tenure Review Process Committee 2018  
Committee on Consensual Relationships Policy 2018  
Bridge Center Steering Committee 2018  
Dietrich College Grand Challenges Committee, Member 2018  
BrainHub Search Committee 2017-2018  
University Promotion & Tenure Committee 2015-2019  
Mellon College of Science, DSF Charitable Foundation  
Evaluation Committee 2017  
Neuroscience Major Steering Committee 2013-  
Neuroscience Major (Cognitive Neuroscience) Advisor 2013-  
University Non-tenure Promotion Committee 2009-2011  
Animal Care and Use Committee 2000-2012  
Dietrich College Dean Search Committee 2013-2014  
Ad Hoc Committee Librarian Reappointment 2013, 2014

**University of Pittsburgh**

Department of Otolaryngology, Faculty Search Committee 2017-2018

