

Curriculum Vitae

Bob McMurray

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Educational and Professional History

Education

- Ph.D. University of Rochester, Brain and Cognitive Sciences, 2004
Dissertation: *Within-Category Variation is Used in Spoken Word Recognition: Temporal Integration at Two Time Scales.*
Supervisors: Richard N. Aslin and Michael K. Tanenhaus.
- M.S. University of Rochester, Brain and Cognitive Sciences, 2003
- B.A., Magna Cum Laude Cornell University, Psychology with Cognitive Studies
Concentration, 1998

Professional and Academic Positions

- 2015- Professor and Collegiate Scholar, Department of Psychological and Brain Sciences, University of Iowa
- 2010- Associate Professor, Department of Psychology, University of Iowa.
Secondary Appointment, Department of Communication Sciences and Disorders
Secondary Appointment, Department of Linguistics
Member, Interdisciplinary Neuroscience Program
Member, Delta Center
- 2004- Assistant Professor, Department of Psychology, University of Iowa
- 1998-2004 Research Assistant, Infant Development Laboratory, University of Rochester
(Supervisor Richard N. Aslin, Ph.D.)
- 1998-2004 Research Assistant, Language Processing Laboratory, University of Rochester
(Supervisor Michael Tanenhaus, Ph.D.)
- 1996-1998 Research Assistant, Human Information Integration Laboratory, Cornell University
(Supervisor: Michael Spivey, Ph.D.)

Professional Development

- 2015 Visiting Scholar, Max Planck Institute for Psycholinguistics, Nijmegen, NL
- 2014 Visiting Scholar, Dept. of Experimental Psychology, Oxford, UK.
- 2003 Categorization Summer School, University of Quebec at Montreal.

Honors and Awards

- 2015 Collegiate Scholar (University of Iowa, College of Liberal Arts and Sciences)
- 2013 Recognition of Excellence Prize, *Learning to Attend, Attending to Learn Workshop*, for Kucker, Samuelson & McMurray (2013)
- 2013 Psychonomic Society Outstanding Young Investigator Award
- 2012 International Society on Infant Studies Graduate Student Paper Award. For paper co-authored with graduate student Gwyneth Rost (Rost & McMurray, 2010)
- 2012 Distinguished Scientific Award for Early Career Contribution to Psychology, Developmental Psychology (American Psychological Association).
- 2011 Boyd McCandless Award (American Psychological Association, Division 7).
- 2010 Deans Scholar (University of Iowa, College of Liberal Arts and Sciences).
- 2009-2010 NIH loan repayment program renewal: *The interaction of online competition and statistical learning: Word recognition and development in normal and impaired listeners.*
- 2008 Junior Faculty Travel Award (International Conference on Infant Studies)
- 2008 Best Perception and Action Model (2008 Meeting of the Cognitive Science Society) (see Toscano & McMurray, 2008)
- 2007-2008 NIH loan repayment program: *Lexical and Statistical Processes in Speech Perception and Development: Normal and Impaired Listeners.*
- 1998 TA Ryan Undergraduate Research Award (Cornell University Dept. of Psychology).
- 1998 Honorable Mention, NSF Graduate Research Fellowship.

Professional Organizations

Psychonomic Society
MidPhon (Mid-Continental Phonetics and Phonology)

Research

Refereed Publications

*	senior author, major contribution	+	undergraduate author
**	secondary contribution	++	graduate student author
***	equal contribution	+++	post-doctoral author
****	minor contribution		

* Kapnoula⁺⁺, E. and McMurray, B. (submitted) Newly learned word-forms are abstract and integrated immediately after acquisition. *Psychonomic Bulletin and Review*

* McMurray, B., Farris-Trimble, A., Seedorff, M., and Rigler, H. (in press) The effect of residual acoustic hearing and adaptation to uncertainty in Cochlear Implant users. *Ear and Hearing*.

* Rigler, H., Farris-Trimble, A., Greiner, L., Walker, J., Tomblin, J.B., and McMurray, B. (in press) The slow developmental timecourse of real-time spoken word recognition. *Developmental Psychology*

- *** Nourski, K.N., Steinschneider, M.S., Rhone⁺⁺⁺, A.R., Oya, H., Kawasaki, H., Howard, M.A., and McMurray, B. (in press) Sound identification in human auditory cortex: Differential contribution of local field potentials and high gamma power as revealed by direct intracranial recordings. *Brain and Language*
- ** Blumberg, M., Coleman, C., Sokoloff, G., Weiner, J., Fritzch, B., and McMurray, B. (2015) Development of twitching in sleeping infant mice depends on sensory experience. *Current Biology*, 25(5), 656-662.
- * Apfelbaum⁺⁺, K. and McMurray, B. (in press) Relative cue encoding in the context of sophisticated models of categorization: Separating information from categorization. *Psychonomic Bulletin and Review*
- *** Wasserman, E., Brooks, D. and McMurray, B. (2015) Pigeons acquire multiple categories in parallel via associative learning: A parallel to human word learning? *Cognition*, 136, 99-122.
- *** Kucker⁺⁺, S.C., Samuelson, L.S., and McMurray, B. (in press) Slowing down fast-mapping: Redefining the dynamics of word learning. *Child Development Perspectives*.
- * Kapnoula⁺⁺, E., Gupta, P., Packard⁺⁺, S., and McMurray, B. (2015) Immediate lexical integration of novel word forms. *Cognition*, 134, 85-99
- ** Nourski, K., Steinschneider, McMurray, B., Kovach, C., Oya, H., Kawasaki, H., and Howard, M. (in press) Functional organization of human auditory cortex: Investigation of response latencies through direct recordings. *Neuroimage*.
- * Toscano⁺⁺, J.C., & McMurray, B. (2015). The time-course of speaking rate compensation: Effects of sentential rate and vowel length on voicing judgments. *Language, Cognition, and Neuroscience*, 30, 529-543.
- * Galle⁺⁺, M., and McMurray, B. (in press) The development of voicing categories: A meta-analysis of 40 years of infant research. *Psychonomic Bulletin and Review*
- * Galle⁺⁺, M., Apfelbaum⁺⁺, K. & McMurray, B. (in press) Within-speaker variability benefits phonological word learning. *Language Learning and Development*
- * McMurray, B., Munson⁺⁺, C. and Tomblin, J.B. (2014). Individual Differences in Language Ability Are Related to Variation in Word Recognition, Not Speech Perception: Evidence From Eye Movements. *Journal of Speech Language Hearing Research*, 57, 1344-1362.
- * Apfelbaum⁺⁺, K., Bullock-Rest⁺, N., Rhone⁺⁺⁺, A., Jongman, K., and McMurray, B. (2014) Contingent categorization in speech perception. *Language, Cognition and Neuroscience* (formerly *Language and Cognitive Processes*), 29(9), 1070-1082.
- * Farris-Trimble⁺⁺⁺, A., McMurray, B., Cigrand⁺, N. and Tomblin, J.B. (2014) The process of spoken word recognition in the face of signal degradation: Cochlear implant users and normal-hearing listeners. *Journal of Experimental Psychology: Human Perception and Performance*, 40(1), 308-327
- **** Dunn, C., Walker, E., Kenworthy, M., Van Voorst, T., Tomblin, J.B., Oleson, J., Haihong, J., Kirk, K.I., McMurray, B., Hanson, M., and Gantz, B. (2014) Longitudinal development of speech perception and language performance in pediatric cochlear implant users: the effect of age at implantation and long term outcomes. *Ear and Hearing*, 35(2), 148-160.

- ** Kovack-Lesh⁺⁺, K.L., McMurray, B., Oakes, L.M. (2014) Four-month-old infants' visual investigation of pairs of cats and dogs: Relations with pet experience and attentional strategy. *Developmental Psychology*, 50(2), 402-413.
- *** Wiffal⁺⁺, T., McMurray, B., and Hazeltine, R. (2014) Similarity impairs motor learning: Implications for the power law of learning? *Journal of Experimental Psychology: General*, 143(1), 312-331.
- * McMurray, B., Kovack-Lesh, K., Goodwin⁺, D., and McEchron, W. (2013) Infant directed speech and the development of speech perception: Enhancing development or an unintended consequence? *Cognition*, 129(2), 362-378
- * Toscano, J. C., Anderson, N. D., & McMurray, B. (2013). Reconsidering the role of temporal order in spoken word recognition. *Psychonomic Bulletin & Review*, 20, 1-7.
- ** Blumberg, M. S., Coleman, C., Gerth, A. I., & McMurray, B. (2013). Spatiotemporal structure of REM sleep twitching reveals developmental origins of motor synergies. *Current Biology*, 23(21), 2100-2109
- * Farris-Trimble⁺⁺⁺, A., and McMurray, B. (2013) The reliability of eye tracking in the Visual World Paradigm for the study of individual differences in real-time spoken word recognition. *Journal of Speech Language and Hearing Research*, 56, 1328-1345
- * Apfelbaum⁺⁺, K., Hazeltine, E., & McMurray, B. (2013) Statistical learning in reading: Variability in irrelevant letters helps children learn phonics rules. *Developmental Psychology*, 49(7), 1348-1365
- ** Schlesinger, M., and McMurray, B. (2012) The past, present, and future of computational models of cognitive development. *Journal of Cognitive Development*, 27(4), 326-348.
- ** McMurray, B., Horst⁺⁺, J., and Samuelson, L. (2012) Word learning emerges from the interaction of online referent selection and slow associative learning. *Psychological Review*, 119(4), 831-877
- * Toscano⁺⁺, J., and McMurray, B. (2012) Cue-integration and context effects in speech: Evidence against speaking-rate normalization, *Attention, Perception & Psychophysics*, 74(6), 1284-1301.
- **** Kovack-Lesh⁺⁺, K., Oakes, L., and McMurray, B. (2011) Contributions of attentional style and previous experience to 4-month-old infants' categorization. *Infancy*, 17(3), 324-338.
- * Apfelbaum⁺⁺, K., & McMurray, B. (2011) . Using Variability to Guide Dimensional Weighting: Associative Mechanisms in Early Word Learning. *Cognitive Science*, 35(6), 1105-1138.
- * McMurray, B. & Jongman, A. (2011) What information is necessary for speech categorization? Harnessing variability in the speech signal by integrating cues computed relative to expectations. *Psychological Review*, 118(2), 219-246.
- *** Apfelbaum⁺⁺, K., Blumstein, S., and McMurray (2011) Semantic priming is affected by real-time phonological competition: Evidence for continuous cascading systems. *Psychonomic Bulletin & Review*, 18(1), 141-149.
- *** Beckman, J., Helgason, P., McMurray, B. & Ringen, C. (2011) Rate Effects on Swedish VOT: Evidence for Phonological Overspecification. *Journal of Phonetics*, 39, 39-49
- *** Horst, J.S., Samuelson, L.K., Kucker⁺⁺, S. & McMurray, B. (2011) What's new? Children prefer novelty in referent selection. *Cognition*, 118(2), 234-244.

- * Toscano⁺⁺, J., McMurray, B., Dennhardt⁺, J., & Luck, S. (2010) Continuous perception and graded categorization: Electrophysiological evidence for a linear relationship between the acoustic signal and perceptual encoding of speech. *Psychological Science*, 21(10), 1532-1540.
- * Rost⁺⁺, G.C., and McMurray, B. (2010) Finding the signal by adding noise: The role of non-contrastive phonetic variability in early word learning. *Infancy*, 15(6), 608-635.
- * Huette⁺, S., and McMurray, B. (2010) Continuous dynamics of color categorization. *Psychonomic Bulletin & Review*, 17(3), 348-354.
- *** Cole, J.S., Linebaugh⁺⁺, G., Munson⁺⁺, C., and McMurray, B. (2010) Unmasking the acoustic effects of vowel-to-vowel coarticulation: A statistical modeling approach. *Journal of Phonetics*, 38(2), 167-184.
- * Toscano⁺⁺, J., and McMurray, B. (2010) Cue Integration with Categories: A Statistical Approach to Cue Weighting and Combination in Speech Perception. *Cognitive Science*, 34(3), 436-464.
- * McMurray, B., Samelson⁺⁺, V., Lee⁺⁺, S., and Tomblin, J.B. (2010) Individual differences in online spoken word recognition: Implications for SLI. *Cognitive Psychology*, 60(1), 1-39.
- *** Mitchell, C., and McMurray, B. (2009) On leveraged learning in lexical acquisition and its relationship to acceleration. *Cognitive Science*, 33(8), 1503-1523.
- *** McMurray, B., and Wasserman, E. (2009) Variability in languages, variability in learning? *Behavioral and Brain Sciences*, 32, 459-460.
- * Rost⁺⁺, G., and McMurray, B. (2009) Speaker variability augments phonological processing in early word learning. *Developmental Science*, 12(2), 339-349.
- * McMurray, B., Tanenhaus, M.K., and Aslin, R.N. (2009) Within-category VOT affects recovery from "lexical" garden paths: Evidence against phoneme-level inhibition. *Journal of Memory and Language*, 60(1), 65-91. PMCID: PMC2630474
- *** McMurray, B., and Hollich, G. (2009) Core computational principles of language acquisition: can statistical learning do the job? Introduction to Special Section. *Developmental Science*, 12(3), 365-368.
- * McMurray, B., Aslin, R.N., and Toscano, J. (2009) Statistical learning of phonetic categories: Computational insights and limitations. *Developmental Science*, 12(3), 369-379.
- *** Spencer, J., Blumberg, M., McMurray, B., Robinson, S., Samuelson, L., and Tomblin, J.B. (2009) Short arms and talking eggs: Why we should no longer abide the nativist-empiricist debate. *Child Development Perspectives*, 3(2), 79-87.
- *** Spencer, J., Samuelson, L., Blumberg, M., McMurray, B., Robinson, S., and Tomblin, J.B. (2009) Seeing the World Through a Third Eye: Developmental Systems Theory Looks Beyond the Nativist–Empiricist Debate. *Child Development Perspectives*, 3(2), 103-105.
- * McMurray, B., Dennhardt⁺, J., and Struck-Marcell⁺, A. (2008) Context effects on musical chord categorization: Different forms of top-down feedback in speech and music? *Cognitive Science*, 32(5), 893 – 920.
- * McMurray, B., Aslin, R., Tanenhaus, M., Spivey, M., and Subik, D. (2008). Gradient sensitivity to within-category variation in words and syllables. *Journal of Experimental Psychology, Human Perception and Performance*, 34(6), 1609-1631.

- * McMurray, B., Clayards, M., Tanenhaus, M., and Aslin, R. (2008) Tracking the timecourse of phonetic cue integration during spoken word recognition. *Psychonomic Bulletin and Review*, 15(6), 1064-1071. PMID: PMC2621311
- * McMurray, B. (2007) Defusing the childhood vocabulary explosion. *Science*, 317(5838), 631.
- *** Gow, D.W., and McMurray, B. (2007) Word recognition and phonology: The case of English coronal place assimilation. J.S. Cole & J. Hualdo (Eds.) *Papers in Laboratory Phonology 9*. (pp 173-200). New York: Mouton de Gruyter.
- * McMurray, B., and Aslin, R.N. (2005) Infants are sensitive to within-category variation in speech perception. *Cognition*, 95(2), B15-B26.
- *** McMurray, B. and Gow, D.W. (2005) It's not how many dimensions you have, it's what you do with them. *Behavioral and Brain Sciences*, 28(1), 31.
- * McMurray, B. and Aslin, R.N. (2004). Anticipatory eye movements reveal infants' auditory and visual categories. *Infancy*, 6(2), 203-229.
- ** Aslin, R.N., and McMurray, B. (2004). Where babies look: An overview of methods for assessing visual fixations and eye movements in young infants. *Infancy*, 6(2), 155-163.
- **** Jordan, K., Weiss, D., Hauser, M. and McMurray, B. (2004). Antiphonal responses to loud contact calls produced by cotton-top tamarins (*Saguinus oedipus*). *International Journal of Primatology*, 25(2), 465-475.
- * McMurray, B., Tanenhaus, M., Aslin, R. and Spivey, M. (2003). Probabilistic constraint satisfaction at the lexical/phonetic interface: Evidence for gradient effects of within-category VOT on lexical access. *Journal of Psycholinguistic Research*, 32(1), 77-97.
- ** Magnuson, J., McMurray, B., Tanenhaus, M. and Aslin, R. (2003). Lexical effects on compensation for coarticulation: A tale of two systems? *Cognitive Science*, 27(5), 801-805.
- ** Magnuson, J., McMurray, B., Tanenhaus, M. and Aslin, R. (2003). Lexical effects on compensation for coarticulation: The ghost of Christmas past. *Cognitive Science*, 27(2), 285-298.
- * McMurray, B., Tanenhaus, M., and Aslin, R. (2002). Gradient effects of within-category phonetic variation on lexical access, *Cognition*, 86(2), B33-B42. PMID: PMC2630474.
- ** Tanenhaus, M., Magnuson, J., McMurray, B., and Aslin, R. (2000). No compelling evidence against feedback in spoken word recognition. *Behavioral and Brain Sciences*. 23(3), 348-349.
- * McMurray, B., and Spivey, M. (2000). The categorical perception of consonants: the interaction of learning and processing. *Proceedings of the Chicago Linguistics Society*, 34(2), 205-220.

Book Chapters

- * McMurray, B., Rhone⁺⁺⁺, A.E. and Hannaway⁺⁺, K. (in press) Relativity in speech perception: From locus equations to predictive coding. In A. Agwuele and A. Lotto (Eds.) *Essays in Speech Processes: Language Production and Perception*. Sheffield, UK: Equinox Publishing
- * McMurray, B. (2014) The Vocabulary Spurt. In P. Brook and V. Kempe (Eds). *Encyclopedia of Language Development* (pp. 660-662), New York: Sage.

- * McMurray, B. and Benders, T. (2014) Speech perception and categorization (development of). P. Brook and V. Kempe (Eds). *Encyclopedia of Language Development*, (pp. 576-580). New York: Sage.
- * McMurray, B., Zhao⁺⁺, L., Kucker⁺⁺, S., and Samuelson, L. (2013). Pushing the envelope of associative learning: Internal representations and dynamic competition transform association into development. In G. Hollich and L. Gogate (Eds) *Theoretical and Computational Models of Word Learning: Trends in Psychology and Artificial Intelligence* (pp. 49-80). Hershey, PA: IGI Global
- * McMurray, B., and Farris-Trimble⁺⁺⁺, A. (2012) Emergent information-level coupling between perception and production. In A. C. Cohn, C. Fougerson, and M. Huffman (eds) *The Oxford Handbook of Laboratory Phonology* (pp. 369-395). Oxford, UK: The Oxford University Press.
- *** McMurray, B., Cole, J.S., and Munson⁺⁺, C. (2011) Features as an emergent product of computing perceptual cues relative to expectations. In R. Ridouane and N. Clement (Eds) *Where do Features Come From?* (pp. 197-236). Amsterdam: John Benjamins Publishing
- * McMurray, B., Horst⁺⁺, J., Toscano⁺⁺, J., and Samuelson, L. (2009) Towards an integration of connectionist learning and dynamical systems processing: case studies in speech and lexical development. In Spencer, J., Thomas, M., and McClelland, J. (Eds) *Toward a Unified Theory of Development: Connectionism and Dynamic Systems Theory Re-Considered* (pp. 218-252). London: Oxford University Press

Manuscripts under review

- ** Jongman, A., and McMurray, B. (submitted) On invariance: Acoustic input meets listener expectations. Invited chapter for Lahiri, A. (Ed) *Essays in honor of Sheila Blumstein*.

Manuscripts in revision

- * Apfelbaum⁺⁺, K., and McMurray, B. (submitted) Dynamic learning: The influence of real-time processing on word learning. *Cognitive Psychology*
- * Apfelbaum⁺⁺, K., Rhone⁺⁺⁺, A. and McMurray, B. (in revision) Taming data overload in laboratory phonology: Combining phonetic cues for highly multi-dimensional analyses. *Journal of Phonetics*
- * Kapnoula⁺⁺, E. and McMurray, B. (in revision) Inhibitory processes are plastic: Training alters competition between words. *Journal of Experimental Psychology: General*
- * McMurray, B. (submitted) Evo/Devo in the third dimension: The role of real-time processes in language development and evolution. Invited submission to K. Oller, R. Dale and U. Griebel (Eds). *New Frontiers in Language Evolution and Development*. Special issue of Topics in Cognitive Science
- *** McMurray, B. and Jongman, A. (submitted) What comes after [f]? Prediction in speech is a product of expectation and signal. *Psychological Science*
- ** Oleson, J., Cavanaugh, J., McMurray, B., and Brown, G. (in revision) A multiplicity adjusted test procedure for time-specific comparisons of temporal population curves. *Statistics in Medicine*.
- * Roembke⁺⁺, T. and McMurray, B. (in revision) Observational Word Learning: Unresolved Questions. *Journal of Memory and Language*.

- ** Zhao, L., Packard, S., McMurray, B., and Gupta, P. (in revision) Semantic similarity influences the learning of phonological word forms: Evidence from concurrent word learning. *Cognition*

Manuscripts in Preparation

- * McMurray, B., Kapnoula⁺⁺, E., & Gaskell, M. G. (submitted). Learning and integration of new word-forms: Consolidation, pruning and the emergence of automaticity. In M. G. Gaskell & J. Mirković (Eds.), *Speech Perception and Spoken Word Recognition*. London: Taylor & Francis.
- * Kulikov, V., and McMurray, B. (in preparation) Gradiency and discreteness in Russian devoicing and voicing assimilation: An instrumental analysis.
- * McMurray, B. (in preparation). KlattWorks: a [somewhat] new systematic approach to formant-based speech synthesis for empirical research.
- *** McMurray, B., and Mitchell, C. (in preparation) The mathematical underpinnings of acceleration in early word learning: The Vocabulary Explosion is a by product of parallel learning.
- * Rhone⁺⁺⁺, A., Nourski, K., Oya, H., Kawaski, H., Howard, M., and McMurray, B. (in preparation) Spatiotemporal dynamics of audiovisual speech processing obtained from direct intracranial recordings.

Published Conference Proceedings, Technical Reports and Other Manuscripts

- * McMurray, B. (2014) *The cognitive origins of Michelle Obama's "Bruce Braley" gaffe*. Guest opinion on Z. Goldfarb (Ed) *Washington Post Wong Blog*. 1/13/2014
<http://www.washingtonpost.com/blogs/wonkblog/wp/2014/10/13/inside-the-brain-of-michelle-obama-as-she-repeatedly-mixes-up-a-senate-candidates-name/>
- * McMurray, B., Brown, C., and Zimmermann, J. (2014) *Preliminary Results of the Access Code Decoding Intervention, Revised*. Technical report prepared for Foundations in Learning, Inc. Available: www.foundations-learning.org.
- * McMurray, B., Brown, C., and Zimmermann, J. (2010) *Preliminary Results on the Access Code Decoding Intervention*. Technical report prepared for Foundations in Learning, Inc. Available: www.foundations-learning.org.
- **** Toscano, J., Mueller, K., McMurray, B., and Tomblin, J.B. (2010) Simulating individual differences in language ability and genetic differences in FOXP2 using a neural network model of the SRT task. In S. Ohlsson & R. Catrambone (Eds.) *Proceedings of the 32nd Annual Conference of the Cognitive Science Society* (pp. 2230-2235). Austin, TX: Cognitive Science Society.
- *** Mitchell, C., and McMurray, B. (2008) A stochastic model of the vocabulary explosion. In B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science Society* (pp. 1919-1926). Austin, TX: Cognitive Science Society.
- * Toscano, J., and McMurray, B. (2008) Using the distributional statistics of speech sounds for learning and combining multiple acoustic cues. In B. C. Love, K. McRae, & V. M. Sloutsky (Eds.), *Proceedings of the 30th Annual Conference of the Cognitive Science Society* (pp. 433-439). Austin, TX: Cognitive Science Society.
- * McMurray, B. (2007) Moo-cow! Mummy! More! How do children learn so many words? *Significance: The Magazine of the Royal Statistical Society*, 4.

- * Horst, J.S., McMurray, B., and Samuelson, L.K. (2006) Online processing is essential for learning: Understanding fast mapping and word learning in a dynamic connectionist architecture. In R. Sun (Ed) *The proceedings of the 28th meeting of the Cognitive Science Society* (pp. 339-343), Austin, TX: Cognitive Science Society.
- *** Gow, D., and McMurray, B., (2004) From sound to sense and back again: the integration of lexical and speech processes. *The proceedings of From Sound to Sense: 50+ years of discoveries in Speech Communication*.
- ** Tanenhaus, M., Magnuson, J., McMurray, B., and Aslin, R. (2000). Does lexical knowledge mediate perceptual effects of compensatory coarticulation? Evidence from research with an artificial lexicon. *Proceedings of the Workshop on Spoken Word Access Processes*.
- * McMurray, B. (2000). Connectionism for ...er... linguists. In Crosswhite, K., and McDonough, J., eds., *The University of Rochester Working Papers in the Language Sciences*, 2000(1), 72-96.
- * McMurray, B., Spivey, M., and Aslin, R. (2000). The Perception of Consonants by Adults and Infants: Categorical or Categorized? Preliminary Results. In Crosswhite, K., and Magnuson, J., eds., *The University of Rochester Working Papers in the Language Sciences*, 2000(2), 215-256.
- * McMurray, B. (1998). The Hebbian Acoustic/Phonetic Category Acquisition Model (HAPCAM): a neurologically plausible connectionist account of the development of speech perception abilities. Senior Honors Thesis, Cornell University, Department of Psychology.

Invited Addresses and Colloquia

- McMurray, B. (2015, July) The slow development of real-time language processing: Interactions across timescales in lexical development. Plenary address to Symposium on Child Language, Coventry, UK.
- McMurray, B. (2015, March) What information is in the speech signal? Not quite enough. Real-time processes and demands on development. Invited colloquium to Max Planck Institute of Psycholinguistics, Nijmegen, The Netherlands.
- McMurray, B. (2015, March) Language processing in real-time: Using ECoG to investigate the dynamics of spoken word recognition. Invited address to Neurobiology of Language Division, Max Planck Institute of Psycholinguistics, Nijmegen, The Netherlands
- McMurray, B. (2015, March) The immediate plasticity of intra-lexical inhibition: New data and new thoughts on lexical integration and consolidation. Invited address to *Workshop on Memory consolidation & word learning*, Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands
- McMurray, B. (2015, February) Does irrelevant variability help children learn early reading skills? Field testing principles of associative learning in the classroom. Invited address to *Workshop on Translating Language Science Research to Practice*, Arlington, VA.
- McMurray, B. (2015, February) *Vocabulary acquisition in an Evo-Devo Framework*. Invited address to the University of Memphis Cognitive Science Program, Memphis, TN
- McMurray, B. (2015, January) *Principles of learning and processing in reading and oral language: Implications for assessment and remediation*. Invited address to the Florida Center for Reading Research, Florida State University, Tallahassee, FL.

- McMurray, B. (2014, November) *Speech processing in real-time: Neural underpinnings and implications for hearing disorders*. Keynote address to Iowa Center for Molecular Auditory Neuroscience Symposium. Iowa City, IA.
- McMurray, B. (2014, October) *Building abstraction from simple developmental mechanisms: Case studies in speech perception, word learning, reading and communicative disorders*. Invited address in Perspectives on Language Development, Symposium at Max Planck Institute for Psycholinguistics, Nijmegen, NL.
- McMurray, B. (2014, August) *The role of computational modeling in developmental systems theory: Revealing emergence and highlighting principles of development*. Keynote address to the *Neural Computation and Psychology Workshop*, Lancaster, UK
- McMurray, B. (2014, June) *Language processing in real-time: Neural underpinnings and implications for communication disorders*. Invited colloquium to the Mind Brain Research Network, Albuquerque New Mexico.
- McMurray, B. (2014, May) *What information is in the speech signal? Not quite enough. The implications of phonetic analysis for theories of the development of speech perception*. Invited address to the *Workshop on Influences of Input on Child Language Development*, Boys Town National Research Hospital, Omaha, NE.
- McMurray, B. (2014, February) *The Emergent Power of Simple Principles: Accounting for language and individual differences at multiple time-scales*. Invited colloquium to the Warwick University, Dept. of Psychology.
- McMurray, B. (2014, February) *What information is in the speech signal? Not quite enough. The implications of phonetic analysis for psychological theories of perception and development*. Invited colloquium to the York University, Dept. of Psychology
- McMurray, B. (2014, February) *Speech perception: Hard alone but easy with a team. The graded, incremental, lexical, and interactive nature of speech processing*. Invited Colloquium to the University College London Ear Institute
- McMurray, B. (2014, February) *The Emergent Power of Simple Principles: Accounting for language, speech and individual differences at multiple time-scales*. Invited colloquium to the Oxford University, Dept. of Psychology.
- McMurray, B. (2013, October) *What information is in the speech signal? Not quite enough. The implications of phonetic analysis for psychological theories of perception and development*. Invited colloquium to the University of Arizona, Dept. of Linguistics
- McMurray, B. (2013, May) *A real-time view of individual differences in cognition: Language processing and language disorders*. Invited address to The Midwest Psychological Association, Chicago, IL.
- McMurray, B. (2013, March) *Speech perception: Hard alone but easy with a team. The graded, incremental, lexical, interactive and developmental nature of speech*. Master Class taught at Radboud University Nijmegen, The Netherlands
- McMurray, B. (2013, February) *The Emergent Power of Simple Principles: Accounting for language, speech and individual differences*. Invited talk to University of Wisconsin, Dept. of Psychology.
- McMurray, B. (2013, February) *The Emergent Power of Simple Principles: Accounting for language, speech and individual differences*. Invited talk to University of Psychology, Dept. of Psychology.

- McMurray, B. (2012, November) *The Emergent Power of Simple Principles: Accounting for language, speech and individual differences*. Invited talk to University of Rochester, Dept. of Brain and Cognitive Sciences.
- McMurray, B. (2012, September) *Speech perception: Hard alone but easy with a team. The graded, incremental, lexical, interactive and developmental nature of speech*. Invited talk to Indiana University, Cognitive Science Program
- McMurray, B. (2012, July) *Evo/Devo in the 3rd Dimension: The role of real-time processes in language development and evolution*. Invited talk to the *Workshop on Language Evolution*, Konrad Lorenz Institute, Vienna, Austria
- McMurray, B. (2012, April) *Speech perception, hard alone but easy with a team: The graded, incremental, lexical, interactive and developmental nature of speech*. Invited colloquium to the University of Kansas, Dept. of Linguistics
- McMurray, B. (2012, February) *Speech perception, hard alone but easy with a team: The graded, incremental, lexical, interactive and developmental nature of speech*. Invited colloquium to the University of Chicago, Workshop on Language, Cognition, and Computation.
- McMurray, B. (2011, December) *Two timescales are better than one: The interaction of online and developmental processes in auditory word recognition and learning*. Invited colloquium to the University of Las Vegas, Nevada, Department of Psychology.
- Samuelson, L. and McMurray, B. (2011, October) *How do you learn to learn words? A computational perspective*. Invited paper for *Cognitive Development Society Pre-Conference: Creating Development: Integrating Processes over Multiple Time Scales*. Philadelphia, PA.
- McMurray, B. (2011, June) *Speech perception as a window on language: evidence from online processing in normal listeners, listeners with language impairment, and cochlear implant users*. Plenary address to Society for Research on Child Language Disorders.
- McMurray, B. (2011, February) *Two timescales are better than one: The interaction of online and developmental processes in word recognition and learning*. Invited colloquium to The Ohio State University, Department of Psychology
- McMurray, B. (2010, October) *Embracing Variability: real-time speech perception as a graded, interactive process. Evidence from eye-movements, ERPs, and computational models*. Invited address to University of Iowa Hospitals and Clinics, Department of Neurosurgery.
- McMurray, B. (2009, September) *Two timescales are better than one: The interaction of online and developmental processes in word recognition and learning*. Invited address to Northwestern University, Language and Cognition Interdepartmental Group
- McMurray, B. (2009, May) σ^2 . Invited address to *The Future of Cognitive Science*, Merced, CA.
- McMurray, B. (2009, March) *Language use at two timescales: Word recognition and learning as the interaction of online processes and developmental history*. Invited colloquium to the University of Illinois, Language Processing Brown Bag.
- McMurray, B. (2009, March) *What do phonemes do all day? Seeking the computational reality of sub-lexical processes*. Invited colloquium to the University of Illinois, Dept. of Linguistics..
- McMurray, B. (2008, October) *Language use at two timescales: Word recognition and word learning as the interaction of online processes and developmental history*. Invited colloquium to University of California at Merced, Dept. of Cognitive Science.

- McMurray, B. (2008, September) *Language use at two timescales: Word recognition and word learning as the interaction of online processes and developmental history*. Invited colloquium to Johns Hopkins University, Dept. of Cognitive Science.
- McMurray, B. (2008, May) *Continuing a tradition of Big Red subversion: The radical role of simple mechanisms in speech perception and development*. Invited presentation to the 20th Anniversary of the Cornell University Cognitive Science Program.
- McMurray, B. (2007, September) *The power of parallelism, the grace of gradiency: Core computations in word recognition, and development*. Invited presentation to Duke University, Department of Psychology, Developmental Area.
- McMurray, B. (2007, September) *The power of parallelism, the grace of gradiency: Core computations in word recognition, and development*. Invited presentation to University of Memphis, Department of Psychology.
- McMurray, B. (2007, July) *Word learning is more than learning and words: Computational Investigations*. Invited tutorial presented at Council on Academic Programs in Communication Sciences and Disorders, Summer Workshop. University of Iowa.
- McMurray, B. (2007, March) *Spoken language comprehension at two time scales: developmental, and momentary*. Invited colloquium presented at the Grinnell University Department of Psychology.
- McMurray, B. (2006, February) *Back to the future: Where we're going, we don't need phonemes. Implications of a gradient lexicon*. Invited colloquium presented at the Rice University Department of Linguistics.
- McMurray, B. (2006, February) *Back to the future: Where we're going, we don't need phonemes. Implications of a gradient lexicon*. Invited colloquium presented at the University of Iowa Department of Linguistics.
- McMurray, B. (2006, January) *Continuous detail is used in language comprehension and language learning: Temporal Integration at two time scales*. Invited colloquium presented at the University of Illinois Department of Psychology.
- McMurray, B. (2006, January) *Perceptual Categories: Old and gradient, young and sparse*. Invited colloquium presented at the Texas A&M Department of Psychology
- McMurray, B. (2005, September) *Continuous acoustic detail affects spoken word recognition Implications for cognition, development and language disorders*. Invited colloquium presented at the Indiana University School of Medicine.
- McMurray, B. (2005, February) *Perception & Cognition: One at last in spoken word recognition*. Invited talk presented at the University of Iowa Dept. of Otolaryngology and Cochlear Implant Group
- McMurray, B. (2005, March) *Within-category information is used in language processing: Temporal Integration at two timescales*. Invited talk presented at the Purdue University Dept. of Psychology
- Gow, D. and McMurray, B. (2004, June) *From sound to sense and back again: the integration of lexical and speech processes*. Invited paper for From Sound to Sense: 50+ Years of Discoveries in Speech Communication, Boston, Massachusetts.

- McMurray, B. (2003, September). *Within-category acoustic variation is signal, not noise: A new look at Categorical Perception and the problem of covariance*. Invited talk presented at the Massachusetts Institute of Technology, Speech Communication Group.
- McMurray, B. (2002, April). *Two B or not two B: categorical perception in lexical and non-lexical tasks*. Invited talk presented at the Brown University Department of Cognitive and Linguistic Sciences
- McMurray, B. (2001, July). *The eyes betray the ears. Speech perception: categorical or categorized?* Invited talk presented at the University of Calgary, Department of Psychology

Conference Symposia

- Kucker, S., McMurray, B., and Samuelson, L. (2015, March) Principles of learning and processing in reading and oral language: Implications for assessment and remediation. Presentation in Kucker, S. (chair) From Initial Exposure to Retention: The Impact of Non-Linguistic and Linguistic Factors on Word Learning. Symposium presented at the *Society for Research in Child Development*, Philadelphia, PA.
- McMurray, B. (2013) Individual differences in real-time language processing: Language Impairment and Cochlear Implants. Invited presentation in Van Horne, A. (chair) Expanding the Horizons of Research on Developmental Language Disorders: A Seminar Illustrating Bruce Tomblin's Work. Symposium presented at the *Meeting of the Association of Speech-Language Hearing Association*. Chicago, IL.
- Kucker, S., Samuelson, L.S., and McMurray, B. (2013, March) The Role of Novelty in Categorization and Word Learning. In S. Kucker (chair) The Role of Novelty in Categorization and Word Learning. Symposium presented at the *Society for Research in Child Development*, Seattle, WA.
- McMurray, B. and Toscano, J. (2012, November) The consequences of lexical sensitivity to fine grained detail: solving the problems of integrating cues, and processing speech in time. In A. Jongman and J. Sereno (chairs) The Nature of Lexical Representations in the Perception and Production of Speech. Symposium presented at the *164th Meeting of the Acoustical Society of America*, Kansas City, MO.
- McMurray, B., Kovack-Lesh, K., Goodwin, D., and McEchron, W. (2012, June) Statistical learning of phonetics categories in infancy and infant directed speech: Is phonetic enhancement consistent, intentional and helpful? In S. Curtin (chair) Mapping the acoustic landscape of IDS: What are its implications for learning? Symposium presented at the *International Conference on Infant Studies*, Minneapolis, MN.
- McMurray, B., Apfelbaum, S. and Samuelson, L. (2012, May) Throwing out Lucienne and Laurent with the bathwater: How the development of abstraction via perception and action can emerge from associative systems. In J. Spencer (chair) *From complex insights to complex systems: Rethinking how development happens*. Invited Symposium presented at the *Meeting of the Jean Piaget Society*, Toronto, ON, Canada.
- Van Dam, M., McMurray, B., Ambrose, S., Moeller, M.P., and Tomblin, J.B. (2011, April) Auditory Ability and Language Development: Quantitative Assessments of Input, Output, and Outcomes in Hard-Of-Hearing Children. In J. Gilkerson (chair) What we can learn from counting words: Applications and implications of the automatic measurement of natural environments. Symposium presented at the *Society for Research on Child Development*, Montreal, QC, Canada.

- McMurray, B. (2011, April) Lexical Processes at two Timescales: The Circular Relationship Between Learning and Processing. In A. Fernald & R. Bion (chairs) Constraints on 'Lexical Constraints': How Robust Is Fast Mapping, and What Do Children Actually Learn? Symposium presented at the *Society for Research on Child Development*, Montreal, QC, Canada.
- McMurray, B., and Samuelson, L., (2010, March) Associations: A Foundation for Lexical Development? In L. Samuelson & S. Kucker (chairs) *The Interaction of Auditory and Visual Information in Early Word and Category Learning*. Symposium presented at the International Conference on Infant Studies, Baltimore, MD.
- Apfelbaum, K., Galle, M., and McMurray, B. (2010, March) The Development of Speech Perception is Continuous and Slow, but Multifaceted. In K. Graf Estes (chair) *Infants' Processing of Variation in Speech*. Symposium presented at the International Conference on Infant Studies, Baltimore, MD.
- McMurray, B., Apfelbaum, K., Toscano, J., and Samuelson, L. (2010, March) Something old and something new: Word learning as the interaction of statistical association and dynamic competition. In C. Yu (Chair) *Modeling Statistical Word Learning*. Symposium presented at the International Conference on Infant Studies, Baltimore, MD.
- McMurray, B., and Mitchell, C. (2009, April) Word Frequency, Difficulty, and the Form of Vocabulary Growth. In M. Frank (chair) *From Input to Uptake: Word Frequency Effects as a Window Into the Mechanisms of Early Language Learning*. Symposium presented at the Biennial Meeting of the Society for Research on Child Development, Denver, CO.
- Horst, J., Samuelson, L., and McMurray (2009, April) When Word Learning is Not About Words: Referent Selection and Visual Familiarity. In S. Grassmann & J. Horst (Chairs) *New Perspectives on Mutual Exclusivity*. Symposium presented at the Biennial Meeting of the Society for Research on Child Development, Denver, CO.
- Rost, G., and McMurray, B. (2008, March) Phonetic variability and early word learning. In McMurray, B. (Chair) *The emergence of phonological contrast from lexical and perceptual processes*. Symposium presented at the International Conference on Infant Studies, Vancouver, BC.
- Galle, M., and McMurray, B. (2008, March) Early discrimination of positional variants of consonants: Acquiring subphonemic sensitivity. In K. Onishi, and A. Seidl (Chairs) *Processing and learning of allophonic contrasts in infancy*. Symposium presented at the International Conference on Infant Studies, Vancouver, BC.
- Rost, G., and McMurray, B. (2008, July) Phonological variability and word learning: Infants can learn lexical neighbors. In A. Owen (Chair), *The role of input variability on language acquisition and use*. Symposium presented at the XI International Congress for the study of child language (IASCL): Edinburgh, Scotland.
- Spencer, J. (chair) and McMurray, B. (organizer) (2007, April) *An(other) Inconvenient Truth? Why Substantive Interactionism Should Move Us Beyond the Nature/Nurture Debate*. Roundtable discussion presented at the Biennial Meeting of the Society for Research in Child Development, Boston, MA.
- McMurray, B., Horst, J., and Samuelson, L. (2007, April) The interdependence of long-term learning and real-time behavior: computational investigations with a word learning model. In L. Samuelson & L. Smith (chairs) *It's About Time: New Approaches to Timescales, Computation and*

Processes in Early Word Learning. Symposium presented at the Biennial Meeting of the Society for Research in Child Development, Boston, MA.

McMurray, B., and Aslin, R.N. (2005, April) Statistical learning of phonetic categories: Computational insights and limitations. In B. McMurray & G. Hollich (chairs) *Core Computational Principles of Language Acquisition*. Symposium presented at the Biennial Meeting of the Society for Research in Child Development, Atlanta, GA.

McMurray, B., and Aslin, R.N. (2004, May) Stop-consonant perception in 7.5-month-olds: evidence for gradient categories. In R. Aslin (Chair) *The lexical/phonetic interface in infancy: Coping with multiple sources of variability*. Symposium presented at the International Conference on Infant Studies, Chicago, IL.

Conference Presentations

Kucker, S.C., McMurray, B., & Samuelson, L.K. (2015, June). Optimizing ambiguity: Word learning from uncertainty in vocabulary knowledge. Poster session to be presented at the *45th Annual Meeting of the Jean Piaget Society*, Toronto, Ontario, Canada.

Marino, A., Apfelbaum, K., and McMurray, B. (2015, March) Take it From the Top: Top-Down Speech Learning in Children Using Lexical Information. Poster presented at the *Society for Research in Child Development*, Philadelphia, PA.

Roembke, T., Wiggs, K., and McMurray, B. (2015, March) Special role of words may emerge over time – no evidence for advantage of linguistic stimuli over non-linguistic ones in children. Poster presented at the *Society for Research in Child Development*, Philadelphia, PA.

Smith, N., and McMurray, B. (2015, March) Temporal Responsiveness in Mother-Child Dialogue: A Longitudinal Study of Normal-Hearing and Hearing-Impaired Children. Poster presented at the *Society for Research in Child Development*, Philadelphia, PA.

McMurray, B., and Galle, M. (2014, November) Delayed Integration of Acoustic Cues in Spoken Word Recognition. Poster presented at the *55th Meeting of the Psychonomics Society*, Long Beach, CA.

Kapnoula, E., and McMurray, B., (2014, November) Evidence for Experience-Based Changes in Inter-Lexical Inhibition. Poster presented at the *55th Meeting of the Psychonomics Society*, Long Beach, CA.

Apfelbaum, K.S. and McMurray, B., (2014, November) When Will You Learn? Evidence of Continuous Associative Learning During Lexical Processing. Poster presented at the *55th Meeting of the Psychonomics Society*, Long Beach, CA.

Kapnoula, E., Winn, M., Kong, E., Edwards, J., and McMurray, B. (2014, November) Listeners Differ in Whether They Perceive Speech Gradiently or Categorically: Consequences for Cue Integration. Poster presented at the *55th Meeting of the Psychonomics Society*, Long Beach, CA.

Roembke, T., Freedberg, M., McMurray, B., and Hazeltine, E. (2014, November) Variability in Irrelevant Elements Helps Learning in Motor Analog for Reading. Poster presented at the *55th Meeting of the Psychonomics Society*, Long Beach, CA.

Wasserman, E., Roembke, T., Casler, D., and McMurray, B. (2014, November) Many to Many Category Learning: Building or Pruning? Implications for Human Word Learning. Poster presented at the *55th Meeting of the Psychonomics Society*, Long Beach, CA.

- Kucker, S.C., McMurray, B. and Samuelson, L.K. (2014, November) Optimizing ambiguity: Word learning from uncertainty in vocabulary knowledge. Poster presented at *The Science of Learning* pre-conference for the 2014 International Mind Brain and Education Society Conference, Fort Worth, TX.
- Kapnoula, E., and McMurray, B. (2014, September) Individual differences in phoneme categorization. Paper presented at the *Mid-Continental Workshop on Phonetics and Phonology*, Madison, WI.
- Hannaway, K., and McMurray, B. (2014, September) Lexical effects on early sensory processing reveals the role of top-down feedback on speech perception: Evidence from event-related potentials. Poster presented at the *Mid-Continental Workshop on Phonetics and Phonology*, Madison, WI.
- McMurray, B. (2014, January) *Spoken word recognition in the brain and the problem of time: Speculating out loud*. Paper presented at the Auditory Cognitive Neuroscience Society. Tucson, AZ.
- Blumberg, M.S., Coleman, C.M, McMurray, B., Gerth, A.I., Weiner, J., and Fritzsche, B. (2013, November) Spatiotemporal patterning of limb twitching during active sleep in newborn rats and ErbB2 knockout mice lacking muscle spindles. Poster presented at the *Meeting of the Society of Neuroscience*. San Diego, CA
- Rhone, A., McMurray, B., Oya, H., Nourski, K., Kawasaki, H., and Howard, M. (2013, November) Intracranial recordings reveal spatial and temporal differences in the processing and categorization of speech. Poster presented at *Meeting of the Tucker-Davis Symposium on Advances and Perspectives in Auditory Neurophysiology*. San Diego, CA
- Rhone, A., McMurray, B., Oya, H., Nourski, K., Kawasaki, H., and Howard, M. (2013, November) Intracranial recordings reveal spatial and temporal differences in the processing and categorization of speech. Poster presented at *Meeting of the Society of Neuroscience*. San Diego, CA
- Rhone, A., McMurray, B., Oya, H., Nourski, K., Kawaski, H., and Howard, M. (2013, November) Temporally dynamic cortical processing of spoken words: evidence from intracranial recordings. Poster presented at the *Meeting of the Society for the Neurobiology of Language*. San Diego, CA.
- Warren, D., Duff, M., and McMurray, B. (2013, November) A computational model of distinct hippocampal and cortical contributions to word learning under referential ambiguity. Poster presented at the *Meeting of the Society for the Neurobiology of Language*. San Diego, CA.
- Kucker, S., Samuelson, L., and McMurray, B. (2013, November) When attending is not learning: The role of novelty in word learning in both 18-month-old children and computational models. Poster Presented at *Learning to Attend, Attending to Learn workshop*, San Diego, CA
- Belfi, A., McMurray, B., Rhone, A., Oya, H., Kawasaki, H. and Howard, M. (2013, May) Context Effects of Musical Chord Perception: Intracranial Responses. Paper presented *The Midwestern Music Cognition Symposium*, Columbus, OH
- McMurray, B. (2013, May) The Varied Practice Model (Counter-intuitive to Traditional Approaches) Incorporates “Desirable Difficulties” to Improve Automaticity for Struggling Readers. Paper presented at *The International Reading Association*, San Antonio, TX
- Ryan, D., and McMurray, B. (2013, May) Marietta City Schools’ New Approaches to Intervention Students with Special Needs. Paper presented at *The International Reading Association*, San Antonio, TX

- Munson, C., and McMurray, B. (2013, April) Evidence for talker-specificity and generalization in perceptual learning. Poster presented at *The Workshop on Current Issues and Methods in Speaker Adaptation (CIMSAs)*, Columbus, OH.
- Apfelbaum, K., and McMurray, B. (2012, November) When Will You Learn? Interactions of Real-Time Lexical Processing and Word Learning. Poster presented at *The 53rd Meeting of the Psychonomic Society*, Minneapolis, MN.
- Galle, M., and McMurray, B. (2012, November) Real-Time Integration of Asynchronous Cues to Fricative Voicing and Place of Articulation. Poster presented at *The 53rd Meeting of the Psychonomic Society*, Minneapolis, MN.
- Kapnoula, E., Packard, S., Apfelbaum, K., and Gupta, P. (2012, November) Lexical Integration Without Meaning or Sleep. Poster presented at *The 53rd Meeting of the Psychonomic Society*, Minneapolis, MN.
- Toscano, J., and McMurray, B. (2012, November) Combining Cues to Recognize Speech: Acoustic Measurements of Phonetic Cues to Word-Medial Voicing. Poster presented at *The 53rd Meeting of the Psychonomic Society*, Minneapolis, MN.
- Rhone, A., Apfelbaum, K. and McMurray, B. (2012, October) Understanding speech acoustics in an era of extreme cue-integration: Multi-dimensional phonetics reveals individual differences in fricative production. Poster presented at *The 164th Meeting of the Acoustical Society of America*.
- Galle, M. and McMurray, B. (2012, October) The waiting is the hardest part: How asynchronous acoustic cues are integrated for fricative voicing and place of articulation. Poster presented at *The 164th Meeting of the Acoustical Society of America*.
- Apfelbaum, K., and McMurray, B. (2012, October) Context matters: Analyzing the necessity of context-dependent speech perception in complex models. Poster presented at *The 164th Meeting of the Acoustical Society of America*.
- Toscano, J., and McMurray, B. (2012, October) Voicing in English revisited: Measurement of acoustic features signaling word-medial voicing in trochees. Poster presented at *The 164th Meeting of the Acoustical Society of America*.
- Farris-Trimble, A. and McMurray, B. (2012, October) The contribution of high-frequency information to fine-grained speech perception in cochlear-implant-simulated speech. Poster presented at *The 164th Meeting of the Acoustical Society of America*.
- Kapnoula, E., and McMurray, B. (2012, October) The young and the meaningless: Novel-word learning without meaning or sleep. Poster presented at *The 164th Meeting of the Acoustical Society of America*.
- Rhone, A., Oya, H., McMurray, B., Reale, R., Nourski, K., Kawasaki, H., and Howard, M. (2012, October) Auditory, visual, and audiovisual responses to speech and non-speech recorded directly from the temporal lobe. Paper presented at the *Meeting of the Society for Neuroscience*, New Orleans, LA.
- Belfi, A., Rhone, A., McMurray, B., Oya, H., Kawasaki, H., and Howard, M. (2012, October) The effect of expectancy on musical chord perception: Behavioral and intracranial responses. Paper presented at the *Meeting of the Society for Neuroscience*, New Orleans, LA.
- Kucker, S., Samuelson, L.S., and McMurray, B. (2012, June) Word Knowledge and Vocabulary Experience: Referent Selection and Retention in Fast-Mapping. Paper presented at the *International Conference on Infant Studies*, Minneapolis, MN.

- McMurray, B. (2011, January) Learning, it's not just for kids any more: Implications for cochlear implants and neural architectures for speech perception. Paper presented at the *Meeting of the Auditory Cognitive Neuroscience Society*. Tucson, AZ.
- Toscano, J. and McMurray (2011, January) Measuring perceptual encoding and categorization of speech sounds using an ERP approach. Poster presented at the *Meeting of the Auditory Cognitive Neuroscience Society*. Tucson, AZ.
- Toscano, J. and McMurray, B. (2011, November) Measuring acoustic cue encoding and categorization during speech processing using the auditory N1 and P3 ERP components. Paper presented at the *Auditory Perception, Cognition and Action Meeting*. Seattle WA.
- Toscano, J., Anderson, N. and McMurray, D. (2011, November) The role of time in spoken word recognition: Evidence against temporal order in lexical representations. Poster presented at the *52nd Meeting of the Psychonomics Society*. Seattle, WA.
- Apfelbaum, K. and McMurray, B. (2011, November) Flipping the word upside down: Top-down effects during word learning. Poster presented at the *52nd Meeting of the Psychonomics Society*. Seattle, WA.
- McMurray, B., Apfelbaum, K., and Hazeltine, R.E. (2011, November) Statistical learning and phonics in a laboratory/classroom paradigm: Variability helps. Paper presented at the *52nd Meeting of the Psychonomics Society*. Seattle, WA.
- Trimble, A.F. and McMurray, B. (2011, November) Online spoken word recognition is sensitive to phonological rules. Poster presented at the *52nd Meeting of the Psychonomics Society*. Seattle, WA.
- Trimble, A.F., and McMurray, B. (2011, October) Phonological alternations in spoken word recognition. Paper presented at the *17th Mid-Continental Phonetics and Phonology Conference*. Champaign, IL.
- Galle, M. and McMurray, B. (2011, October) Real-time integration of asynchronous cues to fricative voicing: Evidence for continuous cascades of information. Paper presented at the *17th Mid-Continental Phonetics and Phonology Conference*. Champaign, IL.
- Rhone, A., Apfelbaum, K., and McMurray, B. (2011, October) Dynamic articulatory control during fricative production: Implications for perception. Poster presented at the *17th Mid-Continental Phonetics and Phonology Conference*. Champaign, IL.
- Apfelbaum, K., and McMurray, B. (2011, October) On the necessity of perceptual normalization in speech perception. Poster presented at the *17th Mid-Continental Phonetics and Phonology Conference*. Champaign, IL.
- Toscano, J., Anderson, N. & McMurray, B. (2011, October) The role of phoneme order and phonetic detail in spoken word recognition. Paper presented at the *17th Mid-Continental Phonetics and Phonology Conference*. Champaign, IL.
- Trimble, A.F. (2011, July) Online spoken word recognition in pediatric cochlear implant users. *13th Symposium on Cochlear Implants in Children*. Chicago, IL.
- Apfelbaum, K., Fassett, M., and McMurray, B. (2011, April) The Chicken Helps Build the Egg: Learning Words Facilitates the Acquisition of Speech Categories. Poster presented at the *Society for Research on Child Development*, Montreal, QC, Canada.

- Apfelbaum, K., Galle, M., and McMurray, B. (2011, April) The Role of Single Speaker Acoustic Variation in Early Word Learning. Poster presented at the *Society for Research on Child Development*, Montreal, QC, Canada.
- Wu, Q., Panneton, R. & McMurray, B. (2011, April) Hyperarticulation is Beneficial to but Not Perceptible by Older Infants. Poster presented at the *Society for Research on Child Development*, Montreal, QC, Canada.
- Galle, M., and McMurray, B. (2010, March) A Meta-Analysis of 40 Years of Speech Perception Research in Infancy. Poster presented at the *International Conference on Infant Studies*, Baltimore, MD.
- Wu, J., Panneton, R., and McMurray, B. (2010, March) Hyperarticulation is Beneficial but Not Perceptible by Older Infants. Poster presented at the *International Conference on Infant Studies*, Baltimore, MD.
- Apfelbaum, K., and McMurray, B. (2010, February) When discrimination is not enough: An associative model of the development of phonological cue weighting. Poster presented at *Computational Modeling of Sound Pattern Acquisition Workshop*. Edmonton, AB.
- McMurray, B., and Jongman, A. (2010, February) Statistical and exemplar approaches to speech perception: What abilities must also develop? Poster presented at *Computational Modelling of Sound Pattern Acquisition Workshop*. Edmonton, AB.
- Toscano, J., McMurray, B., Dennhardt, J., and Luck, S. (2009, April) Listeners' sensitivity to acoustic detail in speech at the level of both early encoding and categorization. Poster presented at the *15th International Conference on Event-Related Potentials of the Brain*, Bloomington, IN.
- McMurray, B. and Samuelson, L. (2009, April) Understanding Word Learning in the Context of Processing: A Computational Approach. Poster presented at the *Meeting of the Society for Research in Child Development*, Denver, CO.
- Kovack-Lesh & McMurray, (2009, April) Separating Phonetic Categories in Infant Directed Speech: Intentional Enhancement or Hyperarticulation? Poster presented at the *Meeting of the Society for Research in Child Development*, Denver, CO.
- Galle, M., McMurray, B., Walker, B., Barker, B., and Tomblin, J.B. (2009, April) Preference for Modified Adult Directed and Infant Directed Speech. Poster presented at the *Meeting of the Society for Research in Child Development*, Denver, CO.
- Munson, C., McEchron, W.D., McMurray, B. & Tomblin, J.B. (2008, November) Perceptual sensitivity to within-category acoustic variation by language impaired and typically developing adolescents. Poster presented at the *156th Meeting of the Acoustical Society of America*, Miami, FL.
- Toscano, J. & McMurray, B. (2008, November) Online processing of acoustic cues used in speech perception: Comparing statistical and neural network models. Poster presented at the *156th Meeting of the Acoustical Society of America*, Miami, FL.
- Toscano, J. & McMurray, B. (2008) Perception of voicing is graded all the way down: evidence from electrophysiology. Paper presented at the *14th Mid-Continental Workshop on Phonology*, University of Minnesota.

- Beckman, J. Helgason, P., McMurray, B & Ringen, C. (2008) Phonological overspecification: Evidence from rate effects on Swedish VOT. Paper presented at *14th Mid-Continental Workshop on Phonology*, University of Minnesota.
- Apfelbaum, K., McMurray, B. & Blumstein, S. (2008) The interaction of phonological and semantic activation: where does phonology end and semantics begin? Paper presented at *14th Mid-Continental Workshop on Phonology*, University of Minnesota.
- McMurray & Jongman, (2008, November) From production to acoustics to perception: The case of fricatives. Poster presented at the *156th Meeting of the Acoustical Society of America*, Miami, FL.
- Toscano, J., and McMurray, B. (2008, July) Using the distributional statistics of speech sounds for learning and combining multiple acoustic cues. Poster presented at the *Meeting of the Cognitive Science Society*, Washington, DC.
- Mitchell, C., and McMurray, B. (2008, July) A stochastic model of the vocabulary explosion. Poster presented at the *Meeting of the Cognitive Science Society*, Washington, DC.
- Beckman, J. Helgason, P., McMurray, B. & Ringen, C. (2008, June) Effects of speaking rate on voice-onset time in Swedish: Phonological implications. Paper presented at the *16th Manchester Phonology Meeting*, Manchester, UK.
- McMurray, B., McEchron, D., and Tomblin, J.B (2008, May) The timecourse of frequency effects on word recognition in language impairment: Evidence for impaired inhibition. Poster presented at the *Society for Research in Language Disorders*, Madison, WI.
- Munson, C., McEchron, D., McMurray, B., and Tomblin, J.B. (2008, May) Gradient perception of within-category acoustic detail by normal and language impaired listeners. Poster presented at the *Society for Research in Child Language Disorders*, Madison, WI.
- Horst, J. S., Samuelson, L.K. & McMurray, B. (2008, April) The Dynamics of Referent Selection. Poster presented at *New Directions in Word Learning*. York, UK.
- Kovack-Lesh, K., Oakes, L., and McMurray, B. (2008, March) Multiple Influences on Infants Category Learning. Poster presented at the *International Conference on Infant Studies*, Vancouver, BC.
- Kovack-Lesh, K., McMurray, B., and Oakes, L. (2008, March) Comparing Cats and Dogs: Infants' and Adults' Eye-Movements During Online Comparison. Poster presented at the *International Conference on Infant Studies*, Vancouver, BC.
- McMurray, B., Tanenhaus, M., and Aslin, R. (2007, November) Gradient sensitivity to continuous acoustic detail: avoiding the lexical garden-path. Poster presented at the *48th Meeting of the Psychonomic Society*, Long Beach, CA.
- Robinson, M. and McMurray, B. (2007, November) The timecourse and nature of listeners' sensitivity to indexical information during word recognition. Poster presented at the *48th Meeting of the Psychonomic Society*, Long Beach, CA.
- Munson, C., Cole, J., McMurray, B., and Linebaugh, G. (2007, October) Vowel-to-vowel coarticulation across words in English: Acoustic evidence. Paper presented at the *13th Mid-Continental Workshop on Phonology*, Columbus, OH.

- Toscano, J., Galle, M., and McMurray, B. (2007, October) Learning positional variation and place of articulation in stop consonants from the distributional statistics of acoustic cues. Poster presented at the *13th Mid-Continental Workshop on Phonology*, Columbus, OH.
- Cole, J., McMurray, B., Munson, C., and Linebaugh, G. (2007, October) Parsing acoustic variability as a mechanism for feature abstraction. Paper presented at *Where do Features Come From? Phonological Primitives in the Brain, the Mouth, and the Ear*, Paris.
- Munson, C., and McMurray, B. (2007, October) Perceptual features of place assimilation are continuous and contextually. Poster presented at *Where do Features Come From? Phonological Primitives in the Brain, the Mouth, and the Ear*, Paris.
- Galle, M., and McMurray, B. (2007, October) Infant representations of positional variants of stop consonants. Poster presented at *Where do Features Come From? Phonological Primitives in the Brain, the Mouth, and the Ear*, Paris.
- Toscano, J., and McMurray, B. (2007, October) Integrating acoustic cues to phonetic features: a computational approach to cue weighting. Poster presented at *Where do Features Come From? Phonological Primitives in the Brain, the Mouth, and the Ear*, Paris.
- Samelson, V., McMurray, B., Lee, S., and Tomblin, J.B. (2007, April) Eye Movement During Spoken Word Recognition in Normal and Language-Impaired Adolescents: Activation and Inhibition Effects. Poster presented at the *Biennial Meeting of the Society for Research in Child Development*, Boston, MA.
- Toscano, J., and McMurray, B. (2007, April) Taking Statistical Learning to the Next Level: A Computational Approach to the Acquisition of Multi-Dimensional Categories. Poster presented at the *Biennial Meeting of the Society for Research in Child Development*, Boston, MA.
- Horst, J.S., McMurray, B., and Samuelson, L.K. (2006, July) Online processing is essential for learning: Understanding fast mapping and word learning in a dynamic connectionist architecture. Paper presented at the *28th meeting of the Cognitive Science Society*. Vancouver, British Columbia.
- McMurray, B., Tanenhaus, M., and Aslin, R.N. (2006, June) Garden-path phenomena in spoken word recognition: Gradient sensitivity to continuous acoustic detail facilitates ambiguity resolution. Paper presented at the *151st meeting of the Acoustical Society of America*. Providence, RI.
- Munson, C., McMurray, B., and Gow, D.W. (2006, June) Lexical influences on the progressive facilitation during perception of assimilated speech. Paper presented at the *151st meeting of the Acoustical Society of America*. Providence, RI.
- Toscano, J., and McMurray, B. (2006, June) A lexical locus for the integration of asynchronous cues to voicing: An investigation with natural stimuli. Poster presented at the *151st meeting of the Acoustical Society of America*. Providence, RI.
- Dennhardt, J., McMurray, B., Luck, S., and Toscano, J. (2006, June) Gradient effects of continuous acoustic detail revealed by event-related potentials. Poster presented at the *151st meeting of the Acoustical Society of America*. Providence, RI.
- McMurray, B., Samelson, V., Lee, S.H., and Tomblin, J.B. (2006, June) Eye-movements reveal the timecourse of spoken word recognition in normal and language-impaired adolescents. Poster

- presented at the *Meeting of the Society for Research on Child Language Disorders*, Madison, WI.
- Horst, J.S., Samuelson, L.K., and McMurray, B. (2005, October) Real-Time Dynamics of Language Acquisition in Two-Year-Old Children and Connectionist Models. Poster presented at the 3rd *Meeting of the Cognitive Development Society*. San Diego, CA.
- McMurray, B. (2005, June) Connectionism from Connectionists, Dynamical Systems Theory from Connectionists, and some other stuff... (from Connectionists). Invited commentary and workgroup facilitation presented at *Connectionist and Dynamic Systems Approaches to Development: On the Cusp of a New Grand Theory or Still Too Distributed?* Iowa City, IA.
- Horst, J. S., McMurray, B., and Samuelson, L.K., (2005, June) Connectionist Time and Dynamic Systems Time in One Architecture? Modeling Word Learning at Two Time Scales. Poster presented at *Connectionist and Dynamic Systems Approaches to Development: On the Cusp of a New Grand Theory or Still Too Distributed?* Iowa City, IA.
- Toscano, J., and McMurray, B. (2005, November) Statistical learning cross-constraints and the acquisition of speech categories: a computational approach. Paper presented at the 11th *Meeting of the Midcontinental Workshop on Phonology*. Ann Arbor Michigan.
- Clayards, M. and McMurray, B. (2005, November) Can the temporal unfolding of gradient lexical activation reveal the grain of phonological units? Paper presented at the 11th *Meeting of the Midcontinental Workshop on Phonology*. Ann Arbor Michigan.
- McMurray, B, Gow, D.W., and Tanenhaus, M.K (2004, June) Tracking the timecourse of multiple context effects in assimilated speech. Paper presented at the *Ninth Conference on Laboratory Phonology*, Urbana-Champaign, IL.
- McMurray, B., Clayards, M.A., Aslin, R.N., and Tanenhaus, M.K. (2004, May) Gradient sensitivity to acoustic detail and temporal integration of phonetic cues. Poster presented at the *147th meeting of the Acoustical Society of America*, New York.
- McMurray, B., Maye, J., Lathrop, A., and Aslin, R.N. (2003, November) Categorical Perception of Speech: Task Variations in Infants and Adults. Paper presented at *Auditory Perception, Cognition, and Action Meeting*, Vancouver, Canada.
- Gow, D., McMurray, B., and Tanenhaus (2003, November) Eye Movements Reveal the Time Course of Multiple Context Effects in the Perception of Assimilated Speech. Poster presented at the *44th Annual Meeting of the Psychonomics Society*, Vancouver, Canada.
- McMurray, B., and Aslin, R. (2003, July) Anticipatory eye movements reveal infants' auditory and visual categories. Poster presented at *UQÀM Summer Institute in Cognitive Sciences*, Montreal, Canada.
- McMurray, B. (2002, October) Object Comprehension: it's more than it looks. Commentary given at the *University of Rochester Graduate Conference in Epistemology*, Rochester, NY.
- McMurray, B., and Aslin, R. (2002, April) Anticipatory eye movements (AntiEM): A new method for assessing multi-dimensional categorization in 6-month-olds. Poster presented at *International Conference on Infant Studies*. Toronto, Canada.
- McMurray, B., Tanenhaus, M.K., Aslin, R.N., and Spivey, M.J. (2002, April) Gradient effects of within-category VOT differences on lexical activation as measured by eye fixations. Poster presented at *Temporal Integration in the Perception of Speech*, Aix-en-Provence, France.

- McMurray, B., Tanenhaus, M.K., and Aslin, R.N. (2002, March) The lexical/phonetic interface: Evidence for gradient effects of within-category VOT on lexical access. Paper presented at the *CUNY Sentence Processing Conference*, New York, NY.
- McMurray, B., Magnuson, J.S., Tanenhaus, M.K. and Aslin, R.N. (2001, March) Transitional Probabilities and Lexical Status in Spoken Word Recognition. Poster presented at *CUNY Sentence Processing Conference*, Philadelphia, PA.
- McMurray, B., and Aslin, R.N. (2000, July) Anticipatory eye movements: a technique for assessing auditory categorization in 5-month-old infants. Poster presented at the *International Conference on Infant Studies*, Brighton, England.
- Tanenhaus, M.K., Magnuson, J.S., McMurray, B., and Aslin, R.N. (2000, May) Does lexical knowledge mediate perceptual effects of compensatory coarticulation? Evidence from research with an artificial lexicon. Paper presented at the *Workshop on Spoken Word Access Processes*, Max Planck Institute for Psycholinguistics, Nijmegen, The Netherlands.
- McMurray, B. and Spivey, M.J. (1999, July) The categorical perception of consonants: the interaction of learning and processing. Paper presented at the *Empire State Speech Research Conference*, Binghamton, NY.
- McMurray, B. and Spivey, M.J. (1999, May) The categorical perception of consonants: the interaction of learning and processing. Paper presented at the *34th Meeting of the Chicago Linguistics Society*, Chicago, IL.
- McMurray, B., and Spivey M.J. (1999, April) The categorical perception of consonants: the interaction of learning and processing. Paper presented at the *Second Meeting of the Northeast Cognitive Science Society*, Philadelphia, PA.

Media & Outreach

- McMurray, B. (2015, April) From the pristine lab to the noisy classroom and back again: How the cognitive science of learning can impact teaching, and how the classroom can impact cognitive science. Presentation at University of Iowa, Lunch and Learn Series. Des Moines, IA.
- Research on pigeon categorization as a model system for human word learning (Wasserman, Brooks & McMurray, 2014) was covered in *The Daily Mail*, and *Science Daily*.
- Presentation in Psychology class at Clear Creek Amana High School (2014, April)
- McMurray, B., Brown, C., Hazeltine, E., and Zimmermann, J. (2013, December) The Science of Learning, The Art of Teaching. Evening workshop for Teachers, Administrators and Community Members on incorporating the science of learning into teaching. Iowa City, IA.
- McMurray, B. (2013, April) The Varied Practice Model (Counter-intuitive to Traditional Approaches) Incorporates “Desirable Difficulties” to Improve Automaticity for Struggling Readers. Talk Given at the *International Reading Association* (professional development conference for reading teachers), Atlanta, GA.
- Ryan, D., and McMurray, B. (2013, April) Marietta City Schools’ New Approaches to Intervention: Students with Special Needs. Talk Given at the *International Reading Association* (professional development conference for reading teachers), Atlanta, GA.
- Presentation on Speech Communication at Hoover Elementary Family Enrichment Night (Jan, 2013). ~45 participants

Participation as Panelist in Webinar: *Reading Intervention: When the traditional mastery model doesn't work for English Language Learners*. Sponsor: Foundations in Learning, Inc. (Jan., 2013). ~560 participants

Participation as Panelist in Webinar: *Reading Intervention: When the traditional mastery model doesn't work for middle school students*. Sponsor: Foundations in Learning, Inc. (Dec, 2012)

Participation as Panelist in Webinar: *Reading Intervention: When the traditional mastery model doesn't work for middle school students*. Sponsor: Foundations in Learning, Inc. ~328 participants (Nov, 2012)

Work on variability in reading was publicized on livescience.com, patch.com (Nov, 2012)

Participation as Panelist in Webinar: *Reading Intervention: When the traditional mastery model doesn't work*. Sponsor: Foundations in Learning, Inc. ~88 participants (Oct., 2012)

Participation as Panelist in Webinar: *Reading Intervention: When the traditional mastery model doesn't work*. Sponsor: Foundations in Learning, Inc. ~100 participants (Sept, 2012)

Quoted in Associated Press article "Babies try lip-reading in learning to talk" (Jan. 2012)

SaavyDaddy.com, expert panelist (March, 2009 – present)

Quoted in Parent Magazine (Dec, 2008)

Quoted in Associated Press article "Baby birds babble just like human babies learning to talk" May, 2008

Presentation at Unitarian Universalist Community of Davenport (Oct, 2007)

Work on vocabulary explosion received significant attention including articles by
Associated Press: "Toddler Word Spurts are Guaranteed"
Scientific American: "What Explains Toddlers' Linguistic Leap? Math" (Aug 7, 2007)
Daily Telegraph of London: "Toddler jabbering easy to explain" (Aug 8, 2007)
Science News: "Calculating the Word Spurt" (Aug 18, 2007)
New Scientist: "Computer model may explain toddlers' chattering" (Aug 2, 2007)
Interview on CBC Radio ("and sometimes Y")
Why Files: "Toddler's "vocabulary explosion," explained"

Quoted in NY Times article on infant eye-tracking: "A Baby-Proof Method Tracks Just Where Little Ones Look" (July 31, 2007)

Research Support: External (Current)

Iowa Cochlear Implant Center VI. P50DC000242 National Institutes of Deafness and other Communication Disorders. \$14,076,191 (total). Role: PI (Project Director: Bruce Gantz). 2012-2016

Speech perception, acoustic variability and time: normal and impaired listeners. R01DC008089. National Institutes of Deafness and other Communication Disorders. \$1,570,000 (total). Role PI. 2011-2016

Common Principles in Reading and Skill Learning. 1330318 National Science Foundation. \$493,000 (total). Role: Co-PI (PI: Eliot Hazeltine). 2013 – 2016

The Iowa Assessment of Skills and Knowledge for Automatic Word Recognition and Decoding (iASK) Phase II. Institute for Education Sciences SBIR program. \$900,000 (total). Role: Co-I and lead grant writer (PI: Carolyn Brown and Jerry Zimmermann, Foundations in Learning, Inc.)

Research Support: Internal (Current)

Pruning the associative thicket: Word learning in pigeons, people, and individuals with language learning disabilities. Vice President for Research, Major Project Grant. \$55,000 (total). Role: PI (co-investigators: Ed Wasserman and Karla McGregor)

Grant Consulting (current)

Center for Perception and Communication in Children. NIDCD. Role: Mentor for Subproject 3 (PI: Nicholas Smith; Project Director: Walt Jesteadt, Boys Town National Research Hospital).

Seeing Speech: Building a Community. NSF. Role: Board of Advisors (PI: Diana Archangeli, University of Arizona)

Research Support: External (completed)

The Iowa Assessment of Skills and Knowledge for Automatic Word Recognition and Decoding (iASK): Phase I. Institute for Education Sciences SBIR program. \$150,000 (total). Role: Co-I and lead grant writer (PI: Carolyn Brown and Jerry Zimmermann, Foundations in Learning, Inc.)

Scaling learning theory to multiple pathways: Early reading as a model system. BCS 1026794. National Science Foundation, Brain and Cognitive Sciences. \$105,000 (total). Role Co-PI.. 2010-2011

Iowa Cochlear Implant Clinical Research Center Project 5, P50DC000242. National Institutes of Deafness and other Communication Disorders. \$11,849,169 (total) Role: Investigator. -2006-2011

Lexical Integration of Acoustic Detail in Word Recognition: Cochlear Implants, ARRA supplement to DC008089. National Institutes of Deafness and other Communication Disorders. \$201,686 (total). Role: PI 2009-2010

Lexical Integration of Acoustic Detail in Word Recognition: Normal and Disordered Speech, R01DC008089. National Institutes of Deafness and other Communication Disorders. \$751,336 (total). Role PI 2007-2010

Temporal Integration of Acoustic Detail in Speech, Ruth L. Kirchstein Predoctoral National Research Service Award. (31DC006537-01). Role: PI. 2003-2004.

Research Support Internal (completed)

The microstructure of word recognition in language impairment: Different deficits in inhibition and excitation? Center for Advanced Studies, Spellman-Rockefeller Awards. \$9000 Role: PI. 2006-2007

Acoustic Detail Facilitates Word Recognition, Old Gold Summer Fellowship, University of Iowa. 2005.

Research Support: Students

The development of speech categorization in late child hood. Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant. Student: Ani Danelz, 2013

Early word learning in Infancy: Associative Engines, or Language-Specific Learners. Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant. Student: Kelsey Wiggs, 2013

Online speech processing in pediatric and adult cochlear implant users. Ruth L. Kirchstein
National Research Service Award: National Institute of Deafness and Other Communication Disorders. Student: Ashley Farris-Trimble (Post-Doc), 2011.

Examining neural processing during speech perception. Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant. Student: Lisa Vangsness, 2010.

Perfecting the visual world paradigm. Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant. Student: Meredith England, 2009.

Spoken word recognition: the relationship between lexical structure and acoustic detail Iowa Center for Research by Undergraduates (ICRU) Scholar Assistant. Student: Jennifer Merickel, 2007.

Exploring joint influences on infant categorization: Previous experience and how infants compare on-line between stimuli. University of Iowa Student Government Research Grant. \$1000. Student: Kristine Kovack-Lesh (graduate), 2006

Spoken word recognition in Specific Language Impairment Old Capitol Kiwanis Club. \$200. Student: Brooke Overgard (undergraduate), 2006

Acoustic Cues for Anticipation in Speech Perception. Sigma Xi: Grants in Aid of Research Program. \$400. Student: Cheyenne Munson (graduate), 2006

The Phonetic Garden Path: Infinite Sounds on a Three Lane Road. University of Iowa Honors Program, Senior Honors Thesis Grant. \$500. Student: Stephanie Huette (undergraduate), 2006

Spoken word recognition: normalized or exemplar-based? University of Iowa, Dewey Stuit Fund. \$300. Student: Molly Robinson (undergraduate), 2006

Spoken word recognition: normalized or exemplar-based? University of Iowa Student Government / University Honors Program. \$500. Student: Molly Robinson (undergraduate), 2006

The Interplay of Continuous and Categorical Information in Speech Perception, Iowa Research Experiences for Undergraduates Award, University of Iowa. Student: Scott Spilger (undergraduate), 2005

Teaching and Student Supervision

Courses Taught (University of Iowa)

Semester	Advisees		Courses Taught	
	Undergrad	Graduate	Course number and Title	Students
Fall, 2004	2	0	31:121 Experimental Psychology II	28
Spring, 2005	5	0	31:121 Experimental Psychology II	21
			31:118 Infant Development	40
Fall, 2005	8	2	31:280 Developmental Science Proseminar	3
			31:118 Infant Development	31
Spring, 2006	9	2	31:121 Experimental Psychology II	23
Fall, 2006	7	4	31:121 Lab in Psychology	14
			31:210 Developmental Science Proseminar	14
Spring, 2007	10	4	31:118 Infant Development	34
Fall, 2007	5	4	31:210 Developmental Science Proseminar	7
Spring, 2008	7	3	-- Developmental Leave --	

Fall, 2008	4	4	31:210 Developmental Science Proseminar	8
Spring, 2009	8	4	31:118 Infant Development	41
Fall, 2009	7	4	31:210 Developmental Science Proseminar	8
			31:118 Infant Development	28
Spring, 2010	8	4	31:137 Language Processes	18
Fall, 2010	6	4	31:210 Developmental Science Proseminar	8
			31:330 Seminar on Speech Perception, Word Recognition and Development	20
Spring, 2011	5	4	31:137 Language Processes	14
			003:186 Problems in speech and hearing sciences (overload)	8
Fall, 2011	5	3	31:210 Developmental Science Proseminar	8
Spring, 2012	4	3	<i>-- No teaching due to service commitments --</i>	
Fall, 2012	7	5	31:210 Developmental Science Proseminar	9
Spring, 2013	5	5	31:330 Seminar on Speech Perception	8
Fall, 2013	5	5	31:291 Auditory Cognitive Neuroscience	3
Spring, 2014	6	4	<i>-- No teaching due to developmental leave --</i>	
Fall, 2014	6	4	31:210 Developmental Science Proseminar	7
			31:273 Cognitive Science of Language Proseminar	16

Students Supervised (University of Iowa)

Degree	Student	Years	Outcome (and what they left to do)
Ph.D.	Kristine Kovack-Lesh	2	Ph.D. Jan, 2008 (Associate Prof., Ripon College)
	Joseph Toscano	6	Ph.D., July, 2011 (Assistant Professor of Psychology, Villanova University)
	Cheyenne Munson	6	Ph.D., Nov., 2011 (Lecturer, Dept. of Psychology, Villanova University)
	Keith Apfelbaum	5	Ph.D., July, 2013 (Postdoctoral Fellow, the Ohio State University)
	Linsey Quinn-Wreidt (Linguistics)	1	Ph.D., July, 2013 (Visiting Assistant Professor, Dept. of Linguistics, U. of Iowa)
	Marcus Galle	6	Ph.D., May, 2014 (Galle Farms, Inc.)
	Michelle Quinn (Comm. Sci & Disorders)	3	In progress
	Efthymia Kapnoura	5	In progress
	Kayleen Hannaway (Neuroscience)	2	In progress
	Tanja Roembke	2	In progress
Significant Doctoral Mentoring	Jessica Horst	2	Ph.D., May, 2008 (Assistant Prof, U. of Sussex)
	Gwyneth Rost (Comm. Sci & Disorders)	3	Ph.D., Oct. 2011 (Assistant Prof., U. of Massachusetts, Amherst)
	Sarah Kucker	4	Ph.D., May, 2013 (Post-doc, Dept. of Communication Sciences and Disorders, University of Texas, Dallas)
	Vladimir Kulikov (Linguistics)	2	Ph.D. May, 2012, (now assistant professor, University of Qatar)
Post-Doc	Shannon Ross-Sheehy	1	Left to join Spencer Lab (UI Psychology)
	Ashley Farris-Trimble	2.5	Left May, 2013; Now, Assistant Professor, Dept. of Linguistics Fraser University,

	Ariane Rhone	1	In progress
Visiting Graduate Student	Tanja Roembke (Fullbright)	1	2013-2014; Ph.D., in progress (University of Iowa)
Honors Students	Stephanie Huette	1.5	BS May, 2007 (Ph.D., 2013 UC Merced; Assistant Professor, Dept. of Psychology U of Memphis)
	Molly Robinson	1.5	BS May, 2007 (Teach for America)
	Megan Mathews ⁴	1	BS May, 2008 (RA in Plumert lab)
	Mary Gannon	1	BS May, 2008
	Lea Greiner ¹	1.5	BS May, 2008 (M.S., Comm. Disorders, Iowa)
	Natasha Bullock-Rest ³	2	BA May, 2010 (RA, Dr. Sheila Blumstein, Brown)
	Jessica Walker ¹	2	BS May, 2011 (M.S., Comm. Disorders, Iowa)
	Lisa Vangsness	2	BA May, 2012
	Aimee Marino	1	BA Dec., 2012
	Kelsey Wiggs	2	BA May, 2014
	Ani Danelz ¹	2	BS, May, 2015 (M.S., Comm. Disorders, Iowa)
	Kathryn Hiolski	2	BA Dec, 2014 (MPH, Minnesota)
Significant Undergrad Projects ²	Joel Dennhardt	1	BS May, 2005 (Residency, Radiology, U of Iowa)
	Andrew Struck-Marcel ⁵	1	BS/BM May, 2005 (M.A., Royal College of Music)
	Leslee Kellogg	1	BS, Dec, 2005 (Ph.D., Psych, U. Chicago)
	William McEchron	1	BA, May 2007 (SR Research)
	Scott Spilger ³	1	BA, May, 2006 (M.S., Linguistics, Wisconsin)
	Jennifer Merickel ³	1.5	BA, May, 2008 (Ph.D., U. Rochester)
	Ashley Walleit	1	BA, May, 2009 (MSW, Iowa)
	Brooke Overgard	2.25	BA, May, 2007
	Nathaniel Anderson ³	1	BS, May, 2011 (Ph.D., U. Illinois)
	Kelsey Wiggs	1.5	BS, May, 2013 (research assistant, U of Iowa)

¹ In Dept. of Communication Sciences and Disorders

² Student did the equivalent of an honors thesis, without being part of the formal program

³ Dept of Linguistics

⁴ Dual major, psychology and art

⁵ Dual major, psychology and music

Courses Taught (University of Rochester)

CSP 502 Cognitive Foundations: Spring, 2002 (20)

Other Teaching

Iowa Summer Workshop on Connectionism: Summer, 2006 (8)

Undergraduate Research Practicum in Psychology (31:185)

Fall, 2004 (2); Spring, 2005 (4); Summer, 2005 (2); Fall, 2005 (6); Spring, 2006 (7); Summer, 2006 (2); Fall, 2006 (6); Spring, 2007 (8); Summer, 2007 (1); Fall, 2007 (3); Spring, 2008 (4); Fall, 2008 (5); Spring, 2009 (6); Fall, 2009 (7); Spring, 2010 (8); Fall, 2010 (4); Spring, 2010 (4); Fall, 2010 (4); Spring, 2011 (3); Fall, 2011(4); Spring, 2012 (2); Fall, 2012 (3); Spring, 2013 (2); Fall, 2013 (3); Spring, 2014 (3); Fall, 2014 (1)

Undergraduate Research Practicum in Communication Sciences and Disorders (03:096)

Fall, 2012 (3); Spring, 2013(2); Fall, 2013 (2); Spring, 2014 (2); Fall, 2014 (2)

Undergraduate Research Practicum in Linguistics (103:095)

Fall, 2014 (1)

Advanced Undergraduate Research Practicum in Psychology (31:188)

Fall, 2005 (1); Spring, 2006 (1); Summer, 2006 (1), Spring, 2007 (1); Spring, 2008 (1); Spring, 2009 (1); Fall, 2009 (1); Fall, 2010 (2); Spring, 2011 (2); Fall, 2014 (2)

Honors Research Practicum (143:100, 003:098; 31:199)

Spring, 2005 (1); Fall, 2005 (1); Spring, 2006 (1); Summer, 2006 (1); Fall , 2006 (1); Spring, 2006 (1); Fall, 2007 (1); Spring, 2008 (1); Spring, 2010 (1); Spring, 2011 (1); Fall, 2011 (1); Spring, 2012 (2); Fall, 2012 (2); Fall, 2014 (1)

Undergraduate Honors Thesis Supervision (31:199)

Kathryn Hiolski (in progress)	Ani Danelz (in progress)	
Aimee Marino (2012)	Lisa Vangsness (2012)	Kelsey Wiggs (2014)
Jessica Walker (Communication Sciences & Disorders, 2011)		
Natasha Bullock-Rest (Linguistics, 2010)		
Lea Greiner (Communication Sciences & Disorders, 2008)	Mary Gannon (2008)	
Megan Mathews (2008)	Molly Robinson (2007)	Stephanie Huette (2007)
Joseph Toscano (U. of Rochester, supervised from Iowa, 2004).		

Research Advisory Committee Service

Jennifer Lee	Valerie Mendez-Gallardo	Gwyneth Rost (Speech Pathology)
Stephanie Packard	Libo Zhao	Sarah Kucker
Andrew Austin	Michelle Quinn (Speech Pathology)	
Catie Hilliard	Marwa Abdalla	Francis Smith
Jodie Smith	Megan Galligan	

Comprehensive Exam Committee Service

2004	Kristine Kovack	Vanessa Simmering	Kara Kosun	Jennifer Lee
2005	Brandon Abbs	Hyunkyu Lee	Wendy Troob	
2006	Sammy Perone			
2007	Christine Ziemer	Gwyneth Rost (Speech Pathology)		
	Sasa Tomosasa (Linguistics)			
2008	Fabian Soto (chair)	Stephanie Packard	Libo Zhao	Lynn Perry
	Valerie Mendez-Gallardo			
2009	Tim Wifal (chair)	Stephanie Packard	Aaron Buss	Katherine Hagerty
2010	Michelle Quinn (Comm Dis.)		Sarah Kucker	Caglar Tas
	Fang Chi Chou (Comm Dis.)		Vladimir Kulikov (Linguistics)	
	Katy Mueller (Comm Dis.)			
2011	Lynn Perry		Shan-Ju Lin (Comm Dis.)	
2012	Shan-Ju Lin (Comm Dis.)		Mouna Attarha	
	Bryan Brown (Comm Dis.)		Dan Vatterott	
2013	Nicole Jardine		Caitlin Hilliard	
	Kelly Cole (Linguistics)		Elizabeth O'Neal	
2014	Sojeong Yoon (Comm Dis.)		Eli Asikin-Garmager (linguistics)	
	Paul Morris (Linguistics)		Francis Smith	

Completed Ph.D.s

Kristine Kovack (DS, 2008), now Associate Professor at Ripon College.
Jessica Horst (DS; Primary Mentor: Larissa Samuelson, 2008), now Associate Professor, University of Sussex.
Joseph Toscano (C&P, 2011), now Assistant Professor, Villanova University
Gwyneth Rost (Comm. Dis; Primary mentor: Karla McGregor, 2011), now Assistant Professor, University of Massachusetts at Amherst
Cheyenne Munson (C&P, 2011), now lecturer, University of Illinois, 2011
Vladimir Kulikov (Linguistics, 2012; Primary Mentor: Cathie Ringen), now assistant professor, University of Qatar.
Lindsey Quinn-Wreidt (Linguistics, 2013; Primary Mentor: Cathie Ringen), now visiting assistant professor, University of Iowa.
Keith Apfelbaum (C&P, 2013), now post-doctoral fellow, Dept. of Psychology, The Ohio State University.
Marcus Galle (DS, 2014), now working for Galle Farms, Inc.

Current Doctoral Student Supervision

Efthymia Kapnoula (C&P) Kayleen Hannaway (Neuroscience)
Tanja Roembke (C&P)
Michelle Quinn (Comm Sci & Disorders ; Co-Advised with J. Bruce Tomblin)

Completed Doctoral Student Research Projects

Vicki Samelson (Speech Pathology), 2005-2006	Jessica Horst, 2006-2008
Sunghye Lee (Speech Pathology), 2005	John Lipinski, 2005
Gwyneth Rost (Speech Pathology), 2007-2010	Stephanie Packard (C&P), 2008-2010
Tim Wifall (C&P), 2009 – 2012	Dan Brooks (BCN)
Sarah Kucker (DS), 2009 – 2013	Libo Zhao (20011-2013)
Vladimir Kulikov (Ling), 2010 – 2012	

Current Doctoral Student Research Projects

Jodi Smith (Clinical) Michael Freedberg (Neuroscience)

M.A. Committee Service

Marwa Abdulla, 2012 (DS) Melinda Grieb, 2010 (Comm Dis)
Vicki Klein, 2005 (Speech Pathology)

M.A. Research Supervision

Hannah Rigler (Comm Sci & Disorders)

Ph.D. Committee Service

Yu-Hisang Wu (Speech Pathology, 2006-2007)	Jessica Horst (2007)
Brandon Abbes (2007)	Kara Recker (2008)
Hyunkyu Lee (2007-2008)	Jeff Johnson (2008)
Vanessa Simmering (2008)	Tomosasa Sasa (Linguistics, 2008)
Hsin-Jen Hsu (Communication Disorders, 2008)	Damon Ng (2009)
Fabian Soto (2010)	Sammy Perone (2010)
Gwyn Rost (Communication Disorders, 2010)	Vladimir Kulikov (Linguistics, 2010)
Valerie Mendez-Gallardo (2010-2011)	Lindsey Quinn-Wriedt (Linguistics, 2011)
Lynn Perry (2011)	Aaron Buss (2012-)

Sarah Kucker (2011-2013)
Michael Freedberg (Neuroscience, 2013-)
Nate Klooster (Neuroscience, 2014-)
Edmarie Guzman-Valez (Neuroscience, 2014-)

Tim Wifall (2013-2014)
Amy Belfi (2013-)
Melissa Pugh (Biostatistics, 2014-)

External Ph.D. Committee Service

Titia Bender, University of Amsterdam (2013)

Post-Doctoral Supervision

Ariane Rhone (2011-present; Dept. of Neurosurgery)
Ashley Ferris-Trimble (2008-present)
Shannon Ross-Sheehy (2007)

Service

Departmental Service

Building Committee, Fall, 2011-2014
Coordinator for Undergraduate Studies, Fall, 2010-Fall, 2013
Cognition Search Committee, Fall, 2011
Acting Area Coordinator, Developmental Science, Fall, 2010
Acting Director, CHILDS Facility, Fall, 2010
Redesigned Developmental Science Website, Fall, 2008
Faculty Advisory Committee, Fall, 2007-Spring, 2010
Developmental Science Search Committee, Fall, 2007-Spring, 2008
Committee for Facilities and Security, Fall, 2006-Fall, 2007
Clinical Search Committee, Fall, 2006-Spring, 2007
Committee for Undergraduate Studies, Fall, 2005-Fall, 2007
Redesigned Developmental Science Website, Fall, 2005
Designed graduate student recruitment poster for Language Group, Fall, 2004
Drafted Developmental Area mission statement, Fall 2004

Teaching Service

Developmental Proseminar, Developmental Science Area, Fall, 2014
Cognitive Science of Language Proseminar, Cognitive Science of Language Program, Fall, 2014
Developmental Proseminar, Developmental Science Area, Fall, 2012
Developmental Proseminar, Developmental Science Area, Fall, 2011
Developmental Proseminar, Developmental Science Area, Fall, 2010
Developmental Proseminar, Developmental Science Area, Fall, 2009
Developmental Proseminar, Developmental Science Area, Fall, 2008
Developmental Proseminar, Developmental Science Area, Fall, 2007
Experimental Psychology II, Cognition and Perception Area, Fall, 2006
Developmental Proseminar, Developmental Science Area, Fall, 2006
Experimental Psychology II, Cognition and Perception Area, Spring 2006
Developmental Proseminar, Developmental Science Area, Fall, 2005
Experimental Psychology II, Cognition and Perception Area, Spring, 2005
Experimental Psychology II, Cognition and Perception Area, Fall, 2004

University Service

Interim Director, Delta Center, Summer 2015 -
 College of Liberal Arts and Science, Process Streamlining Committee, Fall 2014 – Spring, 2015
 College of Liberal Arts and Sciences, Executive Committee, Fall 2014 -
 College of Liberal Arts and Sciences, Faculty Assembly, Fall 2013 -
 Director, Cognitive Science of Language Interdisciplinary Graduate Certificate, Spring 2013-present.
 Comprehensive Examination Committee, Interdisciplinary Program in Neuroscience (2013-)
 Treasurer, Delta Center, Spring, 2011 - present
 Organizing Committee: the Cognitive Science of Language Interdisciplinary Graduate Certificate, Fall, 2012 - Spring 2013.
 College of Liberal Arts and Sciences, Pre-Medicine Curriculum Committee, Spring, 2012-Spring, 2015
 Selection Committee, Michael J. Brody Award for Faculty Excellence in Service to the University and the State of Iowa, 2011
 Faculty Council, Fall, 2011-Spring, 2013
 Faculty Senate, Spring, 2009--Spring, 2013
 College of Liberal Arts and Sciences, Faculty Assembly Representative, Fall, 2006-Spring, 2007

Professional Service

Associate Editor

2014 – *Language, Cognition and Neuroscience* (Spring, 2014-present)
 2014 – *Journal of Experimental Psychology: General* (Spring, 2014-present)
 2011 – 2013 *Psychonomic Bulletin and Review* (Spring 2011 – Fall, 2013)

Guest Associate Editor

2014 *Psychonomic Bulletin and Review* (3 papers)
 2013 *Journal of Speech, Language, Hearing Research* (1 paper)

Editor, Special Section/Issue

McMurray, B., and Hollich, G. (2009) Core Computational Principles of Language Acquisition. Special Section in *Developmental Science*, 12(3)

Editorial Boards

2013- *Infancy*
 2008-2011 *Child Development*
 2010- *Frontiers in Language Science*

Ad Hoc Review service: Journals

2014 18 total (not including associate editing at two journals)
Behavioral Research Methods (1), *Child Development Perspectives* (1), *Child Development* (1), *Cognition* (2), *Cognitive Science* (1), *Infancy* (3), *Journal of Clinical and Experimental Neuropsychology* (1), *Proceedings of the National Academy of Sciences* (3), *Psychonomic Bulletin and Review* (1), *Psychological Review* (1), *TopiCS* (3)
 2013 21 Total (not including editing at *Psychonomic Bulletin and Review*)
Behavioral Neuroscience (1), *Child Development* (3), *Cognition* (1), *Developmental Psychobiology* (2), *Developmental Science* (1), *Journal of the Acoustical Society of America* (1), *Journal of Memory and Language* (1), *Journal of Speech Language Hearing Research* (1), *Language Learning and Development*

	(4), <i>Philosophical Transactions B</i> (1), <i>Psychonomic Bulletin and Review</i> (2 ad-hoc), <i>Psychological Review</i> (2), <i>Psychological Science</i> (1)
2012	14 Total (not including editing at <i>Psychonomic Bulletin and Review</i>) <i>Child Development</i> (1), <i>Cognition</i> (2), <i>Cognitive Science</i> (1), <i>Journal of Experimental Child Psychology</i> (2), <i>Journal of Experimental Psychology: General</i> (1), <i>Journal of Experimental Psychology: Learning Memory and Cognition</i> (1), <i>Journal of Memory and Language</i> (2), <i>Journal of Speech Language Hearing Research</i> (1), <i>Language and Speech</i> (1), <i>Language, Learning and Development</i> (1), <i>Psychological Review</i> (1)
2011	16 Total (not including editing at <i>Psychonomic Bulletin and Review</i>) <i>Attention, Perception and Psychophysics</i> (1); <i>Child Development</i> (1); <i>Cognitive Science</i> (2); <i>Frontiers in Language Sciences</i> (2); <i>Infancy</i> (1); <i>Journal of Experimental Child Psychology</i> (3); <i>Journal of Experimental Psychology: Learning, Memory and Cognition</i> (1); <i>Journal of Memory and Language</i> (3); <i>Journal of Phonetics</i> (1); <i>Journal of Speech Language and Hearing Research</i> (1)
2010	36 Total <i>Animal Cognition</i> (2), <i>Attention, Perception & Psychophysics</i> (1), <i>Behavioral and Brain Sciences</i> (1), <i>Behavior Research Methods</i> (1), <i>Child Development</i> (3), <i>Cognition</i> (3), <i>Cognitive Science</i> (1), <i>Infancy</i> (1), <i>Journal of the Acoustical Society of America</i> (3), <i>Journal of Cognition and Development</i> (1), <i>Journal of Experimental Child Psychology</i> (2), <i>Journal of Experimental Psychology: Learning, Memory and Cognition</i> (2), <i>Journal of the International Phonetic Association</i> (1), <i>Journal of Memory and Language</i> (3), <i>Journal of Phonetics</i> (2), <i>Journal of Speech Language and Hearing Research</i> (2), <i>Language and Speech</i> (1), <i>Language Learning and Development</i> (2), <i>Psychonomic Bulletin and Review</i> (3), <i>Psychological Science</i> (1)
2009	23 Total <i>Autonomous Mental Development</i> (1), <i>Attention, Perception and Psychophysics</i> (3), <i>Child Development</i> (1), <i>Cognition</i> (1), <i>Cognitive Science</i> (3), <i>Cognitive Systems Research</i> (1), <i>Developmental Science</i> (1), <i>Infancy</i> (1), <i>Journal of the Acoustical Society of America</i> (5), <i>Journal of Experimental Child Psychology</i> (1), <i>Journal of Memory and Language</i> (1), <i>Language and Cognitive Processes</i> (1), <i>Language and Speech</i> (1), <i>Language Learning and Development</i> (1), <i>Psychological Science</i> (1)
2008	17 Total <i>Child Development</i> (3), <i>Cognition</i> (2), <i>Cognitive Science</i> (2), <i>Infancy</i> (1), <i>Journal of the Acoustical Society of America</i> (1), <i>Journal of Experimental Child Psychology</i> (2), <i>Journal of Experimental Psychology: Learning, Memory and Cognition</i> (1), <i>Journal of Memory and Language</i> (1), <i>Language and Cognitive Processes</i> (1), <i>Psychonomic Bulletin and Review</i> (1), <i>Psychological Science</i> (2)
2007	8 Total <i>Cognition</i> (1), <i>Developmental Science</i> (1), <i>Journal of the Acoustical Society of America</i> (1), <i>Journal of Experimental Child Psychology</i> (1), <i>Journal of Experimental Psychology: Learning, Memory and Cognition</i> (1), <i>Memory and</i>

	<i>Cognition (1), Psychonomic Bulletin and Review (1), University of Santa Cruz Working Papers in Linguistics (1)</i>
2006	4 Total <i>Infancy (1), Journal of the Acoustical Society of America (3)</i>
2005	8 Total <i>Cognition (1), Cognitive Science (3), Current Directions in Psychological Science (1), Infancy (1), Journal of Experimental Psychology: Learning, Memory and Cognition (1), Perception and Psychophysics (1)</i>
2004	3 Total <i>Infancy (2), Cognitive Science (1)</i>

Grant Reviews, Ad-Hoc

2013	NSF Perception Action & Cognition (2)
2012	NSF Developmental and Learning Sciences
2011	NSF Developmental and Learning Sciences
2010	NSF Perception Action & Cognition NSF Developmental and Learning Sciences
2009	NSF BCS/Linguistics UK Biotechnology and Biological Sciences Research Council
2007	Dutch Science Ministry Dutch Humanities Council
2006	UK Engineering and Physical Sciences Research Council (EPSRC)
2005	NSF BCS/Linguistics
2001	UK Biotechnology and Biological Sciences Research Council, Joint Equipment Initiative Committee

Grant Review Boards

2013-2015	National Science Foundation, Perception, Action and Cognition Program, College of Reviewers
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Grant Review Panels

2015	National Institute of Health, LCOM Study Section, Temporary Member
2013	National Institute of Health, BBBP-J (03) Special emphasis Panel
2007	National Science Foundation, Human and Social Dynamics Panel

Grant Site Visit

2013	National Science Foundation; University of California San Diego, Temporal Dynamics of Learning Center
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Review Service: Books and Book Proposals

	<i>Essays in Speech Processes: Language Production and Perception.</i> (1 chapter)
	APA book proposal review for series on language development (1 proposal), 2013
	Taylor and Francis (five chapters of a psycholinguistics textbook), 2013
	Board of advisors: <i>Theoretical and Computational Models of Word Learning</i> (G. Hollich & L. Gogate, Eds.), 2013
	Oxford University Press (1 Book, 1 Proposal)
	Other Book Chapters (2)

Conference Board of Advisors

2011-present *Auditory Cognitive Neuroscience Conference*

Conference Panels

2013 European Association of Computational Linguistics

2009 Meeting of the Cognitive Science Society

2008 Meeting of the Cognitive Science Society

2008 Experimental and Theoretical Advances in Prosody

2006 Meeting of the Cognitive Science Society

2004 Meeting of the Cognitive Science Society

Committees

2013 Member, Selection Committee, Early Career Outstanding Paper Award. APA Division 7

2011 – 2012 Chair, Search Committee, Boyd McCandless Award. APA Division 7.

Conference Organization

Member of the 2006 Mid-Continental Workshop on Phonology organizing committee (sponsored by the University of Iowa, Dept. of Linguistics).

Other

Developed and released free KlattWorks speech synthesis application (>150 users)

Developed and released ECOGANAL Matlab toolbox for data visualization of electro-corticography data (4 users)

Developed EyelinkAnal eye-movement analysis system (approx 20 users)