

## CURRICULUM VITAE

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### Education

Valparaiso University (Valparaiso, Indiana), B.S., Psychology, Minor Mandarin Chinese, 2002  
Vanderbilt University (Nashville, Tennessee)

M.S., Speech-Language Pathology, 2009

Ph.D., Hearing and Speech Sciences, Major Area: Pediatric Language Disorders,  
Minor Area: Neuroscience, 2014

Dissertation: *Stability and validity of automated vocal analysis in preschoolers with autism spectrum disorders who are in early stages of language development*  
(Co-Advisors: C. Melanie Schuele, PhD and Paul Yoder, PhD)

### Certification:

American Speech-Language-Hearing Association: Certificate of Clinical Competence,  
Speech-Language Pathology

### Academic Appointments

2000-2002 Teaching and Department Assistant, Valparaiso University, Department of Psychology

2000-2002 Research Assistant, Valparaiso University, Department of Psychology

2008-2014 Research Assistant, Vanderbilt University, Department of Hearing and Speech Sciences

2014-2015 Research Assistant Professor, Vanderbilt University, Department of Hearing and Speech Sciences

2015-Present Assistant Professor, Department of Hearing and Speech Sciences, Vanderbilt University Medical Center; Vanderbilt Brain Institute; Vanderbilt Kennedy Center; Frist Center for Autism and Innovation

### Clinical Employment

1994-2002 Student Affiliate, Northwest Indiana Childcare Providers Association, Porter County, IN

2000 Practicum, Northwest Indiana Special Education Center, Merrillville, Indiana

2003-2005 Behavior Management Consultant, Behavior Therapy and Family Counseling Clinic, Westlake Village, CA

- 2007-2009 Speech-Language Pathology Clinical Practicum, Vanderbilt University, Nashville, TN  
 Pediatric Speech and Language Clinic, Autism Spectrum Disorders Team  
 Pediatric Speech and Language Clinic, Feeding and Swallowing Team  
 Pediatric Speech and Language Clinic, Augmentative and Alternative Communication Team and Developmental Disabilities Team  
 Pediatric Speech and Language Clinic, Craniofacial Disorders (Cleft Palate) Team  
 Pediatric Speech and Language Clinic, Preschool and Early Intervention Language Team  
 Pediatric Speech and Language Clinic, Diagnostic Evaluation Team  
 Pi Beta Phi Rehabilitation Institute, Aphasia Clinic  
 Vanderbilt Children's Hospital, Acute Care Speech-Language Pathology  
 Vanderbilt University Medical Center Acute Care Speech-Language Pathology
- 2009 Speech-Language Pathology Clinical Externship, Child Language and Literacy Lab, Vanderbilt University, Nashville, TN
- 2009-2012 Speech-Language Pathology Clinical Fellowship: Autism Consultant and District Language Evaluator, Franklin Special School District, Franklin, TN, 2009-2012

### **Professional Organizations**

American Speech-Language Hearing Association  
 Psi Chi, National Honor Society in Psychology  
 Pi Gamma Mu, National Honor Society in Social Sciences  
 National Foreign Language Honor Society  
 Behavior Analytic Society of Illinois  
 Behavior Analysis Association of Michigan, Autism Special Interest Group Founding Member  
 Autism Society of America  
 Autism Society of Middle Tennessee  
 Vanderbilt Kennedy Center, Investigator  
 Frist Center for Autism & Innovation at Vanderbilt University, Fellow  
 Society for Neuroscience  
 Vanderbilt Brain Institute

### **Professional Activities**

#### Intramural

Vanderbilt Chapter of the National Students of Speech-Language and Hearing Association, 2007-09, Chapter Philanthropy Chair 2009  
 Vanderbilt Department of Hearing and Speech, Masters of Science in Speech-Language Pathology Admissions Committee, 2015-present  
 Application Reviewer, Vanderbilt Undergraduate Research Summer Program, 2019-present  
 Application Reviewer, Vanderbilt Kennedy Center Internal Grant Competition, 2018-2019  
 Chair of Clinical, Behavioral and Intervention Theme Committee, Vanderbilt Kennedy Center Science Day, 2019  
 Chair, Vanderbilt Kennedy Center Science Day, 2020 (Conference Cancelled Due to COVID19)  
 Executive Committee Member, Vanderbilt University Medical Center StrategyShare2021

#### Extramural

Local Organizing Committee, International Multisensory Research Forum, 2017  
 Living Laboratory, Adventure Science Nashville, 2017-present (founding laboratory)  
 Learning and Outreach Committee, Adventure Science Nashville, 2020  
 Ad Hoc Reviewer  
*American Journal of Intellectual and Developmental Disabilities*

*Autism Research*  
*Clinical Linguistics & Phonetics*  
*Ear and Hearing*  
*Journal of Autism and Developmental Disorders*  
*Journal of Child Psychology and Psychiatry*  
*Journal of Experimental Child Psychology*  
*Journal of Speech, Language, and Hearing Research*  
*Language, Speech, and Hearing Services in Schools*  
*Multisensory Research*  
*Neuropsychologia*  
*Pediatrics*  
*Research in Autism Spectrum Disorders*  
*Research in Developmental Disabilities*  
*Scientific Reports*

#### Awards or Recognition

AP Scholar, 1998  
 Tandy Scholar, 1998  
 Presidential Scholarship, 1998-2002  
 Dean's Distinguished Award, 1998-2002  
 Dean's List, Valparaiso University, 1998-2002  
 Alpha Lambda Delta, 1998  
 Psi Chi, 2000  
 Pi Gamma Mu, 2001  
 National Foreign Language Honor Society, 2001  
 Lumina Scholar, 2001  
 Nelson Scholar, 2001  
 Outstanding Chinese Language Scholar, 2002  
 Trainee, *Clinical Specialty Preparation to Serve Infants, Toddlers, and Children With Feeding and Swallowing Disabilities*, Vanderbilt University, US Department of Education Personnel Preparation Grant (PI: Golper), 2007-2009  
 Trainee, *Teachers/Scholars in Language and Literacy*, Vanderbilt University, United States, Department of Education, Office of Special Education Programs PhD Leadership Program (PI: Schuele), 2010-2014  
 Vanderbilt University Graduate School Harold Stirling Vanderbilt Scholarship, 2010-2014  
 Student Research Travel Grant, Vanderbilt University Graduate School, 2012, 2013  
 Vanderbilt Kennedy Center Trainee Student Travel Grant, 2013  
 David Zeaman Award for the Gatlinburg Conference on Intellectual Disabilities, 2014  
 Vanderbilt University Faculty Research Scholars Award, 2015  
 Vanderbilt Institute for Clinical and Translational Research KL2 Scholar, 2015-2018  
 Newman Scholar, 2015-2018  
 Vanderbilt University Faculty Research Scholars Award, 2015  
 Burroughs-Wellcome Translational Science Scholar Award, 2016  
 IDDRRC Exchange Award, 2016  
 ASHA Convention Research Mentoring-Pair Travel Award (mentor; with protégés Jacob Feldman and Kathryn D'Ambrose Slaboch), 2017  
 ASHA Early Career Contributions in Research Award, 2019  
 National Science Foundation Idea Machine Competition Finalist, 2019, for proposal entitled, *Harnessing the Human Diversity of Mind*

## Teaching Activities

Research in Communication Sciences and Disorders, AUD/SLP 5238, Department of Hearing & Speech Sciences, 2020-Present (new core course for clinical AUD and SLP students)

Research Design and Statistical Analysis: Part 2, HRSP 8372, Department of Hearing and Speech Sciences, Vanderbilt University, 2020-Present (core course for PhD students)

Research Design and Statistical Analysis: Part 1, HRSP 8371, Department of Hearing and Speech Sciences, Vanderbilt University, 2019-Present (core course for PhD students)

Directed Study in Psychology, PSY 3840, Department of Psychology, Vanderbilt University, 2018-Present, Upon Request

Independent Study in Medicine, Health and Society, MHS 3850, Medicine, Health, and Society, Vanderbilt University, 2017-Present, Upon Request

Independent Study and Readings in Speech-Language Pathology, HRSP 8388, Department of Hearing and Speech Sciences, Vanderbilt University, 2016-Present, Upon Request

Undergraduate Research in Neuroscience, NSC 3861 and NSC 3862, Undergraduate Neuroscience Program, Vanderbilt University, 2016-Present, Upon Request

Advanced Research in Neuroscience, NSC 3863, Undergraduate Neuroscience Program, Vanderbilt University, 2016-Present, Upon Request

Honors Research in Neuroscience, NSC 4999, Undergraduate Neuroscience Program, Vanderbilt University, 2016-Present, Upon Request

### Teaching Training

Teaching Assistant, General Psychology Lectures and Laboratories, Department of Psychology, Valparaiso University, 2000-2002

Lab Instructor, Child Language Impairment: Nature, SLP 5290, Department of Hearing and Speech Sciences, Vanderbilt University (Instructor: C. Melanie Schuele, PhD), 2010-2014

Teaching Assistant, Neurology of Speech and Language Pathology, SLP 5300, Department of Hearing and Speech Sciences, Vanderbilt University (Instructor: Wanda Webb, PhD), 2013

### Other Teaching Activities

Woynaroski, T. (2010, January). *Understanding autism spectrum disorders: Strategies for the school nurse*. In-service provided for nursing personnel at Franklin Special School District, Franklin, TN, United States.

Woynaroski, T. (2010, April). *Autism spectrum disorders*. Lecture presented at Columbia State University, Columbia, TN, United States.

Woynaroski, T. (2010, April). *Autism 101: Basic training*. Full-day professional development course provided for special education personnel at Franklin Special School District Franklin, TN, United States.

Woynaroski, T. (2011, June). *Avoiding the confounds of verbal IQ tests: Considering nonverbal measures of global intelligence for special populations*. Full-day professional development course provided for special education personnel and psychology staff at Franklin Special School District Franklin, TN, United States.

Woynaroski, T. (2015, October). *Multisensory development: Mature and developing organisms*. Lecture presented in Cognitive Educational Neuroscience to graduate students at Vanderbilt University, Nashville, TN, United States.

Woynaroski, T. (2015, December). *Assessment of prelinguistic communicators*. Lecture presented in Neurology of Speech and Language Pathology to graduate students in speech-language pathology at Vanderbilt University, Nashville, TN, United States.

- Feldman, J. I., & Woynaroski, T. (2016, October). *The neurobiological basis of specific language impairment (SLI)*. Lecture presented in Neurology of Speech and Language Pathology to graduate students in speech-language pathology at Vanderbilt University, Nashville, TN, United States.
- Feldman, J. I., & Woynaroski, T. (2018, February). *Pediatric language disorders: The neurobiological basis of specific language impairment (SLI)?* Lecture presented in Neuroscience for Mental Health Practitioners to graduate students in nursing at Vanderbilt University, Nashville, TN, United States.
- Woynaroski, T. (2018, April). *Recent findings for multisensory processing in ASD: Increasing support for links with language*. Discussion led in for Multisensory Journal Club course for graduate students in Neuroscience and Hearing & Speech Sciences at Vanderbilt University, Nashville, TN, United States.
- Woynaroski, T. (2019, April). *Developmental sequelae and neurophysiologic substrates of sensory seeking in infant siblings of children with autism spectrum disorder*. Article presentation for the Vanderbilt Kennedy Center's Down Syndrome Journal Club, Nashville, TN, United States.

## Publications and Presentations

### Articles in Refereed Journals (55)

- Woynaroski, T., Kwakye, L. D., Foss-Feig, J. H., Stevenson, R. A., Stone, W. L., & Wallace, M. T. (2013). Multisensory speech perception in children with autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 43(12), 2891-2902. <https://doi.org/f5q737>. PMID: 23624833.
- Yoder, P. J., Woynaroski, T., Fey, M. E., & Warren, S. F. (2014). Effects of dose frequency of early communication intervention in young children with and without Down syndrome. *American Journal of Intellectual and Developmental Disabilities*, 119(1), 17-32. <https://doi.org/dckz>. PMID: 24450319.
- Stevenson, R. A., Siemann, J. K., Woynaroski, T., Schneider, B. C., Eberly, H. E., Camarata, S. M., & Wallace, M. T. (2014). Multisensory temporal integration in autism spectrum disorders. *Journal of Neuroscience*, 34(3), 691-697. <https://doi.org/f5p33k>. PMID: 24431427.
- Stevenson, R. A., Siemann, J. K., Woynaroski, T., Schneider, B. C., Eberly, H. E., Camarata, S. M., & Wallace, M. T. (2014). Brief report: Arrested development of audiovisual speech perception in autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 44(6), 1470-1477. <https://doi.org/f53xfs>. PMID: 24218241.
- Woynaroski, T., Yoder, P. J., Fey, M. E., & Warren, S. F. (2014). A transactional model of spoken vocabulary variation in toddlers with intellectual disabilities. *Journal of Speech, Language, and Hearing Research*, 57(5), 1754-1763. [https://doi.org/10.1044/2014\\_JSLHR-L-13-0252](https://doi.org/10.1044/2014_JSLHR-L-13-0252). PMID: 24802090.
- Yoder, P. J., Bottema-Beutel, K., Woynaroski, T., Chandrasekhar, R., & Sandbank, M. (2014). Social communication intervention effects vary by dependent variable type in preschoolers with autism spectrum disorders. *Evidence-Based Communication Assessment and Intervention*, 7(4), 150-174. <https://doi.org/dck2>. PMID: 25346776.
- Stevenson, R. A., Siemann, J. K., Woynaroski, T., Schneider, B. C., Eberly, H. E., Camarata, S. M., & Wallace, M. T. (2014). Evidence for diminished multisensory integration in autism spectrum disorders. *Journal of Autism and Developmental Disorders*, 44(12), 3161-3167. <https://doi.org/f6pdvk>. PMID: 25022248.

- Yoder, P. J., & Woynaroski, T. (2015). How to study the influence of intensity of treatment on generalized skill and knowledge acquisition of students with disabilities. *Journal of Behavioral Education, 24*(1), 152-166. <https://doi.org/gcmdbh>. PMID: 25914513.
- Yoder, P. J., Woynaroski, T., Fey, M. E., Warren, S. F., & Gardner, E. (2015). Why dose frequency affects spoken vocabulary in preschoolers with Down syndrome. *American Journal of Intellectual and Developmental Disabilities, 120*(4), 302-314. <https://doi.org/dck3>. PMID: 26161468
- Woynaroski, T., Yoder, P. J., & Watson, L. R. (2016). Atypical cross-modal profiles and longitudinal associations between vocabulary scores in initially low verbal children with autism spectrum disorders. *Autism Research, 9*(2), 301-310. <https://doi.org/10.1002/aur.1516>. PMID: 26180010
- Woynaroski, T., Watson, L. R., Gardner, E., Newsom, C. R., Keceli-Kaysili, B., & Yoder, P. J. (2016). Early predictors of growth in diversity of key consonants used in communication in initially preverbal children with autism spectrum disorder. *Journal of Autism and Developmental Disabilities, 46*(3), 1013-1024. <https://doi.org/f8ftz2>. PMID: 26603885
- Cascio, C. J., Woynaroski, T., Baranek, G. T., & Wallace, M. T. (2016). Toward an interdisciplinary approach to understanding sensory function in autism spectrum disorder. *Autism Research, 9*(9), 920-925. <https://doi.org/10.1002/aur.1612>. PMID: 27090878
- Yoder, P. J., Camarata, S. M., & Woynaroski, T. (2016). Treating speech comprehensibility in school age children with Down syndrome. *Journal of Speech, Language, and Hearing Research, 59*(3), 446-459. [https://doi.org/10.1044/2015\\_JSLHR-S-15-0148](https://doi.org/10.1044/2015_JSLHR-S-15-0148). PMID: 27300156
- Yoder, P. J., Woynaroski, T., & Camarata, S. M. (2016). Measuring speech comprehensibility in school age children with Down syndrome. *Journal of Speech, Language, and Hearing Research, 59*(3), 460-467. [https://doi.org/10.1044/2015\\_JSLHR-S-15-0149](https://doi.org/10.1044/2015_JSLHR-S-15-0149). PMID: 27299989
- Woynaroski, T., Oller, D. K., Kaceli-Kaysili, B., Xu, D., Richards, J. A., Gilkerson, J., Gray, S., & Yoder, P. J. (2017). The stability and validity of automated vocal analysis in preschoolers with autism spectrum disorder in early stages of language development. *Autism Research, 10*(3), 508-519. <https://doi.org/10.1002/aur.1667>. PMID: 27459107
- Sandbank, M., Woynaroski, T., Watson, L. R., Gardner, E., Keceli-Kaysili, B. & Yoder, P. J. (2017). Predicting intentional communication in preverbal preschoolers with autism spectrum disorder. *Journal of Autism and Developmental Disabilities, 47*(6), 1581-1594. <https://doi.org/gbq879>. PMID: 28258351
- Simon, D. M., Damiano, C. R., Woynaroski, T., Ibañez, L. V., Murias, M., Stone, W. L., Wallace, M. T., & Cascio, C. J. (2017). Neural correlates of sensory hyporesponsiveness in toddlers at high risk for autism spectrum disorder. *Journal of Autism and Developmental Disabilities, 47*(9), 2710-2722. <https://doi.org/gbt8b3>. PMID: 28597185
- Woynaroski, T.\*, Baranek, G.\*, Nowell, S., Turner Brown, L., DuBay, M., Crais, E., & Watson, L. R. (2018). Cascading effects of attention disengagement and sensory seeking on social symptoms in a community sample of infants at-risk for a future diagnosis of autism spectrum disorder. *Developmental Cognitive Neuroscience, 29*, 30-40. <https://doi.org/10.1016/j.dcn.2017.08.006>. PMID: 28869201
- \*Authors made equal contributions
- Woynaroski, T.\*, Damiano-Goodwin, C. R.\*, Simon, D. M., Ibañez, L. V., Murias, M., Kirby, A., Newsom, C. R., Wallace, M. T., Stone, W. L., & Cascio, C. J. (2018). Developmental sequelae and neurophysiological substrates of sensory seeking in infants at heightened risk for autism spectrum disorder. *Developmental Cognitive Neuroscience, 29*, 41-53. <https://doi.org/10.1016/j.dcn.2017.08.005>. PMID: 28889988
- \*Authors made equal contributions

- Harbison, A. L., Woynaroski, T., Tapp, J., Wade, J. W., Warlaumont, A. S., & Yoder, P. J. (2018). A new measure of child vocal reciprocity in children with autism spectrum disorder. *Autism Research*, 11(6), 903-915. <https://doi.org/10.1002/aur.1942>. PMID: 29509308
- McDaniel, J., Yoder, P. J., Woynaroski, T., & Watson, L. R. (2018). Predicting receptive-expressive vocabulary discrepancies in preschool children with autism spectrum disorder. *Journal of Speech, Language, and Hearing Research*, 61(6), 1426-1439. [https://doi.org/10.1044/2018\\_JSLHR-L-17-0101](https://doi.org/10.1044/2018_JSLHR-L-17-0101). PMID: 29800035
- Butera, I. M., Stevenson, R. A., Mangus, B. D., Woynaroski, T., Gifford, R. H., & Wallace, M. T. (2018). Audiovisual integration in postlingually deafened adults with cochlear implants. *Scientific Reports*, 8, Article 11345. <https://doi.org/gd2fqg>. PMID: 30054512
- Bian, D., Zheng, Z., Swanson, A., Weitlauf, A., Woynaroski, T., Cascio, C. J., Key, A. P., Warren, Z., & Sarkar, N. (2018). A novel multisensory stimulation and data capture system (MADCAP) for investigating sensory trajectories in infancy. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 26(8), 1526-1534. <https://doi.org/dck4>. PMID: 30004880
- Williams, Z. J., Failla, M. D., Gotham, K. O., Woynaroski, T., & Cascio, C. J. (2018). Psychometric evaluation of the Short Sensory Profile in youth with autism spectrum disorder. *Journal of Autism and Developmental Disabilities*, 48(12), 4231-4249. <https://doi.org/qf8mks>. PMID: 30019274
- Feldman, J. I., Dunham, K., Cassidy, M., Wallace, M. T., Liu, Y., & Woynaroski, T. (2018). Audiovisual multisensory integration in individuals with autism spectrum disorder: A systematic review and meta-analysis. *Neuroscience and Biobehavioral Reviews*, 95, 220-234. <https://doi.org/10.1016/j.neubiorev.2018.09.020>. PMID: 30287245
- Feldman, J. I., Kuang, W., Conrad, J. G., Tu, A., Santapuram, P., Simon, D. M., Foss-Feig, J. H., Kwakye, L. D., Stevenson, R. A., Wallace, M. T., & Woynaroski, T. (2019). Brief report: Differences in multisensory integration covary with differences in sensory responsiveness in children with and without autism spectrum disorder. *Journal of Autism and Developmental Disabilities*, 49(1), 397-403. <https://doi.org/dck5>. PMID: 30043353
- Bottema-Beutel, K., Woynaroski, T., Louick, R., Keefe, E. S., Watson, L. R., & Yoder, P. J. (2019). Longitudinal associations across vocabulary modalities in young children with autism and typical development. *Autism*, 23(2), 424-435. <https://doi.org/dck6>. PMID: 29307218
- Bottema-Beutel, K., Kim, S. Y., Crowley, S., Augustine, A. E., Keceli-Kaysili, B., Feldman, J. I., & Woynaroski, T. (2019). The stability of joint engagement states in infant siblings of children with ASD: Implications for measurement practices. *Autism Research*, 12(3), 495-504. <https://doi.org/10.1002/aur.2068>. PMID: 30618181
- Benítez-Barrera, C. R., Thompson, E. C., Angley, G. P., Woynaroski, T., & Tharpe, A. M. (2019). Remote microphone system use at home: Impact on child-directed speech. *Journal of Speech, Language, and Hearing Research*, 62(6), 2002-2008. [https://doi.org/10.1044/2019\\_JSLHR-H-18-0325](https://doi.org/10.1044/2019_JSLHR-H-18-0325). PMID: 31112670
- Bryant, L. K., Woynaroski, T., Wallace, M. T., & Cascio, C. J. (2019). Self-reported sensory hypersensitivity moderates association between tactile psychophysical performance and autism-related traits in neurotypical adults. *Journal of Autism and Developmental Disabilities*, 49(8), 3159-3172. <https://doi.org/dck7>. PMID: 31073751
- McDaniel, J., Woynaroski, T., Keceli-Kaysili, B., Watson, L. R., & Yoder, P. J. (2019). Vocal communication with canonical syllables correlates with later expressive language skills in preschool-aged children with autism spectrum disorder. *Journal of Speech, Language, and Hearing Research*, 62(10), 3826-3833. [https://doi.org/10.1044/2019\\_JSLHR-L-19-0162](https://doi.org/10.1044/2019_JSLHR-L-19-0162). PMID: 31638873



- Sandbank, M., Bottema-Beutel, K., Crowley, S., Cassidy, M., Dunham, K., Feldman, J. I., Crank, J., Albarran, S. A., Raj, S., Mahbub, P., & Woynaroski, T. (2020). Project AIM: Autism intervention meta-analysis for studies of young children. *Psychological Bulletin*, 146(1), 1-29. <https://doi.org/10.1037/bul0000215>. PMID: 31763860
- Wallace, M. T., Woynaroski, T., & Stevenson, R. A. (2020). Multisensory integration as a window into orderly and disrupted cognition and communication. *Annual Reviews of Psychology*, 71, 193-219. <https://doi.org/dck8>. PMID: 31518523
- Thompson, E. C., Benítez-Barrera, C. R., Angley, G. P., Woynaroski, T., & Tharpe, A. M. (2020). Remote microphone system use in the homes of children with hearing loss: Impact on caregiver communication and child vocalizations. *Journal of Speech, Language, and Hearing Research*, 63(2), 633-642. [https://doi.org/10.1044/2019\\_JSLHR-19-00197](https://doi.org/10.1044/2019_JSLHR-19-00197). PMID: 31967941
- Sandbank, M., Bottema-Beutel, K., Crowley, S., Cassidy, M., Feldman, J. I., Canihuante, M., & Woynaroski, T. (2020). Intervention effects on language in children with autism spectrum disorder: A Project AIM meta-analysis study. *Journal of Speech, Language, and Hearing Research*, 63(5), 1537-1560. [https://doi.org/10.1044/2020\\_JSLHR-19-00167](https://doi.org/10.1044/2020_JSLHR-19-00167). PMID: 32384865
- Feldman, J. I., Dunham, K., Conrad, J. G., Simon, D. M., Cassidy, M., Liu, Y., Tu, A., Broderick, N., Wallace, M. T., & Woynaroski, T. (2020). Plasticity of temporal binding in children with autism spectrum disorder: A perceptual training single case study. *Research in Autism Spectrum Disorders*, 74, Article 101555. <https://doi.org/10.1016/j.rasd.2020.101555>. PMID: 32440308
- Dunham, K., Feldman, J. I., Cassidy, M., Liu, Y., Suzman, E., Conrad, J. G., Tu, A., Santapuram, P., Simon, D. M., Butera, I. M., Broderick, N., Wallace, M. T., Lewkowicz, D. J., & Woynaroski, T. (2020). Stability of variables derived from measures of multisensory function in children with autism spectrum disorder. *American Journal of Intellectual and Developmental Disabilities*, 125(4), 287-303. <https://doi.org/d2xz>. PMID: 32609807
- Feldman, J. I., Cassidy, M., Liu, Y., Kirby, A. V., Wallace, M. T., & Woynaroski, T. (2020). Relations between sensory responsiveness and features of autism in children. *Brain Sciences*, 10(11), Article 775. <https://doi.org/10.3390/brainsci10110775>. PMID: 33114357
- Parks, K. M. A., Oram Cardy, J. E., Woynaroski, T., Sehl, C. G., & Stevenson, R. A. (2021). Investigating the role of inattention and/or hyperactivity/impulsivity in language and social functioning using a dimensional approach. *Journal of Communication Disorders*, 89, Article 106036. <https://doi.org/10.1016/j.jcomdis.2020.106036>. PMID: 33249356
- Bottema-Beutel, K., Crowley, S., Sandbank, M., & Woynaroski, T. (2021). Research review: Conflicts of interest (COIs) in autism early intervention research – A meta-analysis of COI influences on intervention effects. *Journal of Child Psychology and Psychiatry*, 62(1), 5-15. <https://doi.org/10.1111/jcpp.13249>. PMID: 32353179
- Bottema-Beutel, K., Crowley, S., Sandbank, M., & Woynaroski, T. (2021). Adverse event reporting in intervention research for young autistic children. *Autism*, 25(2), 322-335. <https://doi.org/10.1177/1362361320965331> PMID: 33076682
- Williams, Z. J., He, J. L., Cascio, C. J., & Woynaroski, T. (2021). A review of decreased sound tolerance in autism: Definitions, phenomenology, and potential mechanisms. *Neuroscience and Biobehavioral Reviews*, 121, 1-17. <https://doi.org/10.1016/j.neubiorev.2020.11.030>. PMID: 33285160
- Crank, J., Sandbank, M., Dunham, K., Crowley, S., Bottema-Beutel, K., Feldman, J. I., & Woynaroski, T. (2021). Understanding the effects of naturalistic developmental behavioral interventions: A project AIM meta-analysis. *Autism Research*, 14(4), 817-834. <https://doi.org/10.1002/aur.2471>. PMID: 33480474



- DiCarlo, G. E., Mabry, S. J., Cao, X., McMillan, C., Woynaroski, T., Harrison, F. E., Reddy, I., Matthies, H. J. G., Flynn, C. R., Wallace, M. T., Wu, H., & Galli, A. (2021). Autism-associated variant in the SLC6A3 gene alters the oral microbiome and metabolism in a murine model. *Frontiers in Psychiatry*, *12*, Article 665351. <https://doi.org/10.3389/fpsy.2021.655451>. PMID: 33935841
- Sandbank, M., Bottema-Beutel, K., & Woynaroski, T. (2021). Intervention recommendations for children with autism in light of a changing evidence base. *JAMA Pediatrics*, *175*(4), 341-342. <https://doi.org/10.1001/jamapediatrics.2020.4730>. PMID: 33165523
- Feldman, J. I., Raj, S., Santapuram, P., Golden, A. J., Daly, C., Dunham, K., Suzman, E., Augustine, A. E., Garla, V., Muhumuza, A., Cascio, C. J., Williams, K. L., Kirby, A. V., Keceli-Kaysili, B., & Woynaroski, T. (2021). Sensory responsiveness is linked with communication in infants siblings of children with and without autism. *Journal of Speech, Language, and Hearing Research*, *64*(6), 1964-1976. [https://doi.org/10.1044/2021\\_JSLHR-20-00196](https://doi.org/10.1044/2021_JSLHR-20-00196). PMID: 34003699
- Suzman, E., Williams, Z. J., Feldman, J. I., Failla, M., Cascio, C. J., Wallace, M. T., Niarchou, M., Sutcliffe, J. S., Wodka, E., & Woynaroski, T. (2021). Psychometric validation and refinement of the Interoception Sensory Questionnaire (ISQ) in adolescents and adults on the autism spectrum. *Molecular Autism*, *12*, Article 42. <https://doi.org/gkf7js>. PMID: 34099040
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### Book Chapters (2)

Bottema-Beutel, K., Yoder, P. J., & Woynaroski, T., & Sandbank, M. (2014). Targeted interventions for social communication symptoms in preschoolers with autism spectrum disorders. In F. R. Volkmar, S. J. Rogers, R. Paul, & K. A. Pelphrey (Eds.) *Handbook of autism and pervasive developmental disorders* (4<sup>th</sup> ed., pp. 788-812). John Wiley & Sons, Inc. <https://doi.org/10.1002/9781118911389.hautc31>

Woynaroski, T., Fey, M. E., Warren, S. F., & Yoder, P. J. (2016). Prelinguistic communication intervention for young children with intellectual disabilities: A focus on treatment intensity. In R. A. Sevcik & M. Ronski (Eds.), *Communication interventions for individuals with severe disabilities: Exploring research challenges and opportunities* (pp. 15-34). Brookes Publishing.

### Editorials (1)

Bottema-Beutel, K., Crowley, S., Sandbank, M. & Woynaroski, T. (2020). Errors of omission: Why we are deeply concerned about research on autism therapies. *Spectrum*. <https://www.spectrumnews.org/opinion/errors-of-omission-why-we-are-deeply-concerned-about-research-on-autism-therapies/>

### Peer Reviewed Presentations at Scientific Meetings (114)

Dowell, L. E., Foss-Feig, J. H., Kadivar, H., Stabin, L., Burnette, C., Esters, E., Woynaroski, T., Cascio, C. J., Stone, W. L., & Wallace, M. T. (2008, July). *An extended temporal window for multisensory integration in ASD* [Poster presentation]. International Multisensory Research Forum Annual Meeting, Hamburg, Germany. *Also presented at the Neuroscience Graduate Research Forum at Vanderbilt University, Nashville, TN, United States (2008, April).*

Fisher, J., Werfel, K., & Woynaroski, T. (2010, October). *Dialect 2010: An update for speech-language pathologists* [Conference session]. Tennessee Association of Audiologists and Speech-language Pathologists Annual Convention, Nashville, TN, United States.

Fisher, J., Werfel, K., & Woynaroski, T. (2012, April). *The impact of dialect on academic achievement* [Conference session]. Tennessee Dyslexia Association Annual Conference, Nashville, TN, United States.

Siemann, J. K., Stevenson, R. A., Schneider, B. C., Eberly, H. E., Woynaroski, T., Foss-Feig, J. H., Camarata, S. M., & Wallace, M. T., (2012, May). *Differences in the multisensory temporal binding windows of TD and ASD individuals as a function of stimulus complexity* [Poster presentation]. International Meeting for Autism Research, Toronto, ON, Canada.

Stevenson, R. A., Siemann, J. K., Eberly, H. E., Schneider, B. C., Woynaroski, T., Foss-Feig, J. H., Camarata, S. M., & Wallace, M. T. (2012, May). *The developmental trajectories of multisensory integration differ between autistic and typically developed individuals* [Poster presentation]. International Meeting for Autism Research, Toronto, ON, Canada.

- Woynaroski, T., Dowell, L. E., Foss-Feig, J. H., Stevenson, R. A., Siemann, J. K., Camarata, S. M., & Wallace, M. T. (2012, May). *Multisensory speech perception in high-functioning children with autism spectrum disorders* [Poster presentation]. International Meeting for Autism Research, Toronto, ON, Canada.
- Wallace, M. T., Siemann, J. K., Schneider, B. C., Eberly, H. E., Woynaroski, T., Foss-Feig, J. H., Camarata, S. M., & Stevenson, R. A. (2012, May). *Rates of audiovisual speech integration covary with low-level multisensory temporal processing in ASD individuals* [Paper presentation]. International Meeting for Autism Research, Toronto, ON, Canada.
- Yoder, P. J., Woynaroski, T., Fey, M. E., & Warren, S. F. (2012, November). *Is more treatment better? If so, for whom?* [Conference session]. American Speech-Language-Hearing Association Annual Convention, Atlanta, GA, United States.
- Frantz, R., Woynaroski, T., & Yoder, P. J. (2013, January). *A transactional model of spoken lexical development in toddlers with intellectual disabilities* [Poster presentation]. Vanderbilt Kennedy Center Science Day, Nashville, TN, United States.
- Siemann, J. K., Stevenson, R. A., Schneider, B. C., Eberly, H. E., Woynaroski, T., Camarata, S. M., & Wallace, M. T. (2013, January). *Using a cross-modal illusion to investigate multisensory processing in autism spectrum disorders* [Poster presentation]. Vanderbilt Kennedy Center Science Day, Nashville, TN, United States.
- Stevenson, R. A., Brown, S. M., Segers, M., Bebko, J. M., Woynaroski, T., Siemann, J. K., Greenburg, S. E., Oczak, S., & Wallace, M. T. (2013, January). *Speech-specific deficits in posterior superior temporal sulcus activation during audiovisual speech integration in autism spectrum disorder* [Poster presentation]. Vanderbilt Kennedy Center Science Day, Nashville, TN, United States.
- Woynaroski, T., Frantz, R., Yoder, P. J., Fey, M. E., & Warren, S. F. (2013, March). *A transactional model of spoken lexical development in toddlers with intellectual disabilities* [Poster presentation]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Antonio, TX, United States.
- Siemann, J. K., Stevenson, R. A., Schneider, B. C., Eberly, H. E., Woynaroski, T., Camarata, S. M., & Wallace, M. T. (2013, May). *Perception of the sound induced flash illusion in adolescents with autism spectrum disorders* [Poster presentation]. International Meeting for Autism Research, San Sebastian, Spain.
- Stevenson, R. A., Segers, M., Brown, S. M., Bebko, J. M., Woynaroski, T., Siemann, J. K., Greenberg, S. E., Oczak, S., & Wallace, M. T. (2013, May). *An fMRI study of multisensory integration of audiovisual speech in autism spectrum disorders: Effects of temporal synchrony* [Poster presentation]. International Meeting for Autism Research, San Sebastian, Spain.
- Woynaroski, T., Stevenson, R. A., Siemann, J. K., Dowell, L. E., Foss-Feig, J. H., Rivera, M., & Wallace, M. T. (2013, May). *Evidence of inaccurate and inefficient visual speech perception in children with autism spectrum disorders* [Poster presentation]. International Meeting for Autism Research, San Sebastian, Spain.
- Wallace, M. T., Shuster, A. A., Siemann, J. K., Woynaroski, T., Greenberg, S. E., Camarata, S. M., & Stevenson, R. A. (2013, May). *Multisensory integration of audiovisual speech in noise in autism spectrum disorders* [Poster presentation]. International Meeting for Autism Research, San Sebastian, Spain.
- Bottema-Beutel, K., Yoder, P. J., Woynaroski, T., Chandrasekhar, R., & Sandbank, M. (2013, August). *Social-communication outcomes in preschoolers with autism spectrum disorders: A best-evidence review* [Poster presentation]. American Psychological Association 121st Annual Convention, Honolulu, HI, United States.
- Fey, M. E., Yoder, P. J., Warren, S. F., & Woynaroski, T. (2014, March). Dose frequency effects on vocabulary in preschoolers with intellectual disabilities. In P. J. Yoder (Chair), *Dose*

- frequency effects on early communication and vocabulary* [Symposium]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, Chicago, IL, United States.
- Woynaroski, T., Yoder, P. J., Fey, M. E., & Warren, S. F. (2014, March). Does dose frequency of an early communication intervention affect a key prelinguistic communication skill in toddlers with intellectual disabilities? In P. J. Yoder (Chair), *Dose frequency effects on early communication and vocabulary* [Symposium]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, Chicago, IL, United States.
- Yoder, P. J., Woynaroski, T., Fey, M. E., & Warren, S. F. (2014, March). Why does dose frequency affect vocabulary in preschoolers with Down syndrome? In P. J. Yoder (Chair), *Dose frequency effects on early communication and vocabulary* [Symposium]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, Chicago, IL, United States.
- Yoder, P. J., Watson, L. R., Tostanoski, A., & Woynaroski, T. (2014, November). *A transactional account of useful speech acquisition in children with ASD* [Conference session]. American Speech-Language-Hearing Association Annual Convention, Orlando, FL, United States.
- Watson, L. R., Woynaroski, T., & Yoder, P. J. (2015, March). *Productive spoken vocabulary drives vocabulary comprehension in minimally-verbal children with autism* [Poster presentation]. Society for Research in Child Development Biennial Meeting, Philadelphia, PA, United States.
- Woynaroski, T., Yoder, P. J., & Camarata, S. M. (2015, April). *Effective speech therapy method for students with Down syndrome varies by their verbal imitation level* [Poster presentation]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, New Orleans, LA, United States.
- Woynaroski, T., Yoder, P. J., Oller, D. K., Xu, D., Richards, J. A., Gilkerson, J., & Gray, S. (2015, April). *Stability and validity of automated vocal analysis as a measure of vocalization complexity in preschoolers with ASD in early stages of language development* [Paper presentation]. In N. Brady (Chair), *New developments in measuring communication* [Symposium]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, New Orleans, LA, United States.
- Woynaroski, T., Yoder, P. J., Oller, D. K., Xu, D., Richards, J. A., Gilkerson, J., & Gray, S. (2015, May). The validity of automated vocal analysis in minimally verbal preschoolers with autism spectrum disorder. In T. Woynaroski (Chair), *An update on vocal complexity in infants and children with ASD* [Symposium]. International Meeting for Autism Research, Salt Lake City, UT, United States.  
\*[Presentation highlighted by Spectrum News.](#)
- Yoder, P. J., Woynaroski, T., Xu, D., Richards, J.A., Hannon, S., & Gray, S. Oller, D.K., (2015, May). Looking under the hood of the infraphonological vocal complexity score. In T. Woynaroski (Chair), *An update on vocal complexity in infants and children with ASD* [Symposium]. International Meeting for Autism Research, Salt Lake City, UT, United States.
- Yoder, P. J., Woynaroski, T., & Camarata, S. (2015, November). *Effective speech therapy for students with Down syndrome* [Conference session]. American Speech-Language-Hearing Association Annual Convention, Denver, CO, United States.
- Sandbank, M., Yoder, P. J., & Woynaroski, T. (2016, February). *The value of parent play: Predicting intentional communication in children with autism* [Poster presentation]. Annual Conference on Research Innovations in Early Intervention, San Diego, CA, United States.
- Woynaroski, T., Yoder, P. J., & Watson, L. R. (2016, March). Empirical support for a transactional model of spoken language learning in preschoolers with autism spectrum

- disorder. In T. Woynaroski (Chair), *Transactions during the prelinguistic period in children diagnosed with, or at high risk for, autism spectrum disorder* [Symposium]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States.
- Yoder, P. J., Woynaroski, T., & Watson, L. R. (2016, March). Predictors of growth in diversity of key consonants in communication acts (DKCC) in initially preverbal children with ASD. In T. Woynaroski (Chair), *Transactions during the prelinguistic period in children diagnosed with, or at high risk for, autism spectrum disorder* [Symposium]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States.
- Bowman, S. M., Morgan, A., Damiano, C. R., Stone, W. L., Ibañez, L. V., Cascio, C. J., Woynaroski, T. (2016, March). *Sensory hyporesponsivity predicts later difficulties with receptive communication in infants at risk for autism spectrum disorder* [Poster presentation by undergraduate student mentee]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States.  
\*Undergraduate mentee Sarah Bowman was the recipient of the Laraine Masters Glidden Undergraduate Award
- Woynaroski, T., Yoder, P. J., Oller, D. K., Xu, D., Richards, J. A., Gilkerson, J., & Gray, S. (2016, April). *Using automated vocal analysis to predict word use in preverbal preschoolers with autism* [Poster presentation]. Association for Clinical and Translational Science Annual Meeting, Washington, DC, United States.
- Bottema-Beutel, K., Woynaroski, T., & Yoder, P. J. (2016, May). *Longitudinal, cross-modal associations appear to differ in typically developing toddlers as compared to children with autism spectrum disorder* [Poster presentation]. International Meeting for Autism Research, Baltimore, MD, United States.
- Cascio, C. J., Woynaroski, T., Damiano, C. R., Baranek, G. T., & Wallace, M. T. (2016, May). *Sensory dis-integration: Theoretical foundations for and practical barriers to interdisciplinary collaboration among neuroscientists and clinical practitioners focused on sensory function in autism spectrum disorder* [Poster presentation]. International Meeting for Autism Research, Baltimore, MD, United States.
- Woynaroski, T., Damiano, C. R., Cascio, C. J., Stone, W. L., Ibañez, L. V., Bowman, S. M., Morgan, A. (2016, May). *Early sensory hyporesponsivity predicts later deficits with understanding in infants at high risk for autism spectrum disorder* [Poster presentation]. International Meeting for Autism Research, Baltimore, MD, United States.
- Woynaroski, T., Yoder, P. J., & Watson, L. (2016, May). *Empirical support for a transactional model of spoken language acquisition in preschoolers with autism spectrum disorder* [Poster presentation]. International Meeting for Autism Research, Baltimore, MD, United States.
- Yoder, P. J., Watson, L., & Woynaroski, T. (2016, May). *The discrepancy between receptive and expressive vocabulary in preschoolers with autism spectrum disorder* [Poster presentation]. International Meeting for Autism Research, Baltimore, MD, United States.
- Yaseen, L., Damiano, C. R., Ibañez, L. V., Bowman, S. M., Morgan, A., Stone, W. L., Cascio, C. J., Woynaroski, T. (2016, March). *Sensory hyporesponsivity predicts later difficulties with receptive communication in infants at risk for autism spectrum disorder* [Poster presentation by high school student mentee]. Vanderbilt Kennedy Center Science Day, Nashville, TN, United States.
- Tu, A., Kuang, W., Conrad, J. G., Santapuram, P., Yaseen, L., Feldman, J. I., Bingham, E., Woynaroski, T. (2016, September). *Potential impact of singing on multisensory integration in children with autism spectrum disorder: A pilot study* [Poster presentation by undergraduate student mentee]. Program for Music, Mind, & Society at Vanderbilt University 3rd Annual Symposium, Nashville, TN, United States. *Also presented at*



*Vanderbilt Kennedy Center Science Day, Nashville, TN, United States (2016, September).*

Feldman, J. I., & Woynaroski, T. (2016, November). *An analysis of CELF-4 administration and scoring errors made by undergraduate research assistants on a multidisciplinary research project.* [Poster presentation by graduate student mentee]. American Speech-Language-Hearing Association Annual Convention, Philadelphia, PA, United States.

Simon, D. M., Damiano, C. R., Woynaroski, T., Ibañez, L., Murias, M., Stone, W., Wallace, M., & Cascio, C. J. (2016, November). *Neural correlates of sensory hyporesponsiveness in toddlers at high risk for autism spectrum disorder* [Poster presentation]. Society for Neuroscience Annual Meeting, San Diego, CA, United States.

Woynaroski, T., Simon, D. M., Damiano, C. R., Newsom, C. R., Ibañez, L. V., Murias, M., Stone, W. L., Wallace, M. T., & Cascio, C. J. (2016, November). *Neurophysiological substrates and developmental sequelae of sensory seeking in infants at high risk for autism spectrum disorder* [Poster presentation]. Society for Neuroscience Annual Meeting, San Diego, CA, United States.

\*Presentation selected as one of SFN's "Hot Topics" of 2016 and [highlighted by Spectrum News](#).

Woynaroski, T., Yoder, P. J., Oller, D.K., Xu, D., Richards, J.A., Gilkerson, J., & Gray, S. (2017, January). *Exploring automated measures of vocal complexity in preschoolers with autism spectrum disorder* [Poster presentation]. Auditory Cognitive Neuroscience Society Annual Meeting, Gainesville, FL, United States.

Feldman, J. I., Kuang, W., Conrad, J. G., Tu, A., Santapuram, P., Simon, D. M., Yaseen, L., Wallace, M. T., & Woynaroski, T. (2017, March). *Associations between sensory integration and sensory responsiveness in children with and without autism spectrum disorder* [Poster presentation by graduate student mentee]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Antonio, TX, United States. *Also presented at the Vanderbilt Bill Wilkerson Center for Otolaryngology and Communication Sciences Combined Poster Session, Nashville, TN, United States (2017, April).*

Slaboch, K. D., Woynaroski, T., Yoder, P. J., Tapp, J., & Bodfish, J. (2017, March). *Developing an observational measure of the flexible use of pre-linguistic vocalizations in preverbal children with autism* [Poster presentation]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Antonio, TX, United States.

Tu, A., Feldman, J. I., Kuang, W., Conrad, J. G., Santapuram, P., Bingham, E., Woynaroski, T. (2017, March). *The impact of singing on multisensory integration in children with autism spectrum disorder: A pilot study* [Poster presentation by undergraduate student mentee]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Antonio, TX, United States.

Baranek, G. T., Woynaroski, T., Nowell, S., Turner Brown, L., DuBay, M., Crais, E., & Watson, L. R. (2017, May) *Cascading effects of attention disengagement and sensory seeking on social symptoms in a community sample of infants at-risk for a future diagnosis of ASD* [Poster presentation]. International Meeting for Autism Research Conference, San Francisco, CA, United States.

Slaboch, K. D., Woynaroski, T., Yoder, P. J., & Bodfish, J. (2017, May). *Developing an observational measure of the flexible use of pre-linguistic vocalizations in preverbal children with autism* [Poster presentation]. International Meeting for Autism Research Conference, San Francisco, CA, United States.

Woynaroski, T., Simon, D. M., Damiano, C. R., Newsom, C. R., Ibañez, L. V., Murias, M., Stone, W. L., Wallace, M. T. & Cascio, C. J. (2017, May). *Neurophysiological substrates and developmental sequelae of sensory seeking in infants at high risk for autism spectrum disorder* [Paper presentation]. In M. Dapretto (Chair), *altered sensory*



- processing and social functioning in ASD: Examining associations and mechanisms through multiple methods and populations* [Symposium]. International Meeting for Autism Research Conference, San Francisco, CA, United States.
- Conrad, J. G., Feldman, J. I., Tu, A., Kuang, W., Wallace, M. T., & Woynaroski, T. (2017, May). *Perceptual training in children with autism spectrum disorder: A proposed study utilizing single case research design* [Poster presentation by undergraduate student mentee]. Annual International Multisensory Research Forum, Nashville, TN, United States.
- Feldman, J. I., & Woynaroski, T. (2017, May). *The relation between multisensory integration, communication and autism symptomatology: A meta-analysis* [Poster presentation by graduate student mentee]. Annual International Multisensory Research Forum, Nashville, TN. *Also presented at Vanderbilt Kennedy Center Science Day, Nashville, TN, United States (2018, January).*
- Kuang, W., Feldman, J. I., Conrad, J. G., Tu, A., Santapuram, P., Simon, D. M., Wallace, M. T., & Woynaroski, T. (2017, May). *Correlations between multisensory integration and sensory responsiveness in children with and without autism spectrum disorder* [Poster presentation by undergraduate student mentee]. Annual International Multisensory Research Forum, Nashville, TN, United States. *Also presented at Vanderbilt Kennedy Center Science Day, Nashville, TN, United States (2016, September).*
- Santapuram, P., Feldman, J. I., Bowman, S. M., Morgan, A., Heflin, B., Augustine, A. E., Keceli-Kaysili, B., Cascio, C. J. & Woynaroski, T. (2017, May). *Looking predicts vocal complexity and language development in infants at risk for ASD* [Poster presentation by undergraduate student mentee]. Annual International Multisensory Research Forum, Nashville, TN, United States. *Also presented at Vanderbilt Kennedy Center Science Day, Nashville, TN, United States (2018, January).*
- Tu, A., Feldman, J. I., Kuang, W., Conrad, J. G., Santapuram, P., Bingham, E., & Woynaroski, T. (2017, May). *The impact of singing on multisensory integration in children with autism spectrum disorder* [Poster presentation by undergraduate student mentee]. Annual International Multisensory Research Forum, Nashville, TN.
- Woynaroski, T., Edmunds, S. R., Feldman, J. I., Simon, D. M., Tu, A., Kuang, W., Conrad, J. G., Santapuram, P., & Wallace, M. T. (2017, May). *Temporal facilitation of audiovisual speech processing in young children with autism spectrum disorder* [Poster presentation]. Annual International Multisensory Research Forum, Nashville, TN, United States.
- McDaniel, J., Salomon, T., Yoder, P. J., Woynaroski, T., Keceli-Kaysili, B., & Watson, L. R. (2017, November). *Association between vocal communication with canonical syllables & expressive language in young children with ASD* [Poster presentation]. American Speech-Language-Hearing Association Annual Convention, Los Angeles, CA, United States.
- Slaboch, K. D., Woynaroski, T., McDaniel, J., Yoder, P. J., Watson, L. R. & Bodfish, J. (2017, November). *Determining how preverbal children with autism spectrum disorder combine facial affect & prelinguistic vocalizations* [Poster presentation]. American Speech-Language-Hearing Association Annual Convention, Los Angeles, CA, United States.
- Feldman, J. I., Kuang, W., Simon, D. M., Conrad, J. G., Tu, A., Santapuram, P., Wallace, M. T., & Woynaroski, T. (2017, November). *Associations between multisensory integration and sensory responsiveness in children with autism spectrum disorder* [Poster presentation by graduate student mentee]. Society for Neuroscience Annual Meeting, Washington, DC, United States.
- Woynaroski, T., Simon, D. M., Feldman, J. I., Edmunds, S. R., Tu, A., Kuang, W., Conrad, J. G., Santapuram, P., & Wallace, M. T. (2017, November). *Temporal facilitation of audiovisual speech processing in young children with and without autism spectrum disorder* [Poster presentation]. Society for Neuroscience Annual Meeting, Washington, DC, United States.

- States. *Also presented by graduate student mentee at the Vanderbilt Bill Wilkerson Center for Otolaryngology and Communication Sciences Combined Poster Session, Nashville, TN, United States (2018, March).*
- Dunham, K., Feldman, J. I., Santapuram, P., Bowman, S. M., Keceli-Kaysili, B., & Woynaroski, T. (2018, January). *Relative stability and validity of various methods of eye gaze analysis for predicting language and communication ability in infants* [Poster presentation by undergraduate student mentee]. Vanderbilt Kennedy Center Science Day, Nashville, TN, United States. *Also presented at the Vanderbilt Bill Wilkerson Center for Otolaryngology and Communication Sciences Combined Poster Session, Nashville, TN, United States (2018, March).*
- Golden, A. J., Feldman, J. I., Bowman, S. M., Santapuram, P., Dunham, K., Augustine, A. E., Suzman, E., Broderick, N., Keceli-Kaysili, B., & Woynaroski, T. (2018, January). *Targeted early intervention on sensory function in high risk infants: A proposed study utilizing single case research design* [Poster presentation by undergraduate student mentee]. Vanderbilt Kennedy Center Science Day, Nashville, TN, United States.
- Salomon, T., McDaniel, J., Yoder, P. J., Woynaroski, T., Keceli-Kaysili, B., & Watson, L. R. (2018, January) *Association between vocal communication with canonical syllables & expressive language in young children with ASD* [Poster presentation]. Vanderbilt Kennedy Center Science Day, Nashville, TN, United States.
- Augustine, A. E., Feldman, J. I., Bottema-Beutel, K., Crowley, S., Kim, S. Y., Keceli-Kaysili, B., Bowman, S. M., Santapuram, P., Golden, A. J., Suzman, E., Broderick, N., Cascio, C., J. & Woynaroski, T. (2018, April). *Stability and validity of parent-child engagement in infants and toddlers at high risk of autism spectrum disorder* [Poster presentation by undergraduate student mentee]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States. *Also presented at Vanderbilt Kennedy Center Science Day, Nashville, TN, United States (2018, January).*
- Bowman, S. M., Feldman, J. I., Keceli-Kaysili, B., Santapuram, P., Augustine, A. E., Golden, A. J., Suzman, E., Broderick, N., Cascio, C., J. & Woynaroski, T. (2018, April). *Stability of indices of sensory responsiveness in infants at risk for autism spectrum disorder* [Poster presentation by undergraduate student mentee]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States.
- Feldman, J. I., De Niar, M. A., Conrad, J. G., Kuang, W., Tu, A., Cassidy, M., Liu, Y., Simon, D. M., Wallace, M. T., & Woynaroski, T. (2018, April). *Relations between metrics of multisensory integration, communication, and broader autism symptom severity in children with and without autism spectrum disorder* [Poster presentation by graduate student mentee]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States.
- Golden, A. J., Feldman, J. I., Damiano-Goodwin, C. R., Simon, D. M., Ibañez, L. V., Stone, W. L., Cascio, C., J. & Woynaroski, T. (2018, April). *Sensory hyperresponsivity predicts future communication and social skill in infants at risk for autism spectrum disorder* [Poster presentation by undergraduate student mentee]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States.
- Santapuram, P., Feldman, J. I., Bowman, S. M., Heflin, B. H., Augustine, A. E., Golden, A. J., Keceli-Kaysili, B., Suzman, E., Broderick, N., Cascio, C., J. & Woynaroski, T. (2018, April). *Eye gaze patterns correlate with vocal complexity and language development in infants at high- and low-risk for autism spectrum disorder* [Poster presentation by undergraduate student mentee]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA.
- Woynaroski, T. (2018, April). *From the Tower of Babel to today: A look back on the history of thinking about prelinguistic vocalizations* [Discussion]. In J. McDaniel (Chair), *Vocal development in children with autism spectrum disorder and children with Fragile X*

- syndrome* [Symposium]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States.
- Woynaroski, T., Feldman, J. I., Edmunds, S. R., Simon, D. M., Tu, A., Kuang, W., Conrad, J. G., Santapuram, P., Broderick, N., & Wallace, M. T. (2018, April). *Biobehavioral measures of audiovisual speech processing are associated with language in children with and without autism spectrum disorder* [Poster presentation]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States.
- Dunham, K., Feldman, J. I., Conrad, J. G., Simon, D. M., Tu, A., Broderick, N., Wallace, M. T., & Woynaroski, T. (2018, June). *Perceptual training in children with autism spectrum disorder: A single-case treatment study* [Poster presentation by undergraduate student mentee]. Annual International Multisensory Research Forum, Toronto, ON, Canada.
- Feldman, J. I., Dunham, K., Cassidy, M., Samuel, A. G., Liu, Y., & Woynaroski, T. (2018, June). *Group differences in audiovisual multisensory integration in individuals with and without autism spectrum disorder: A systematic review and meta-analysis* [Poster presentation by graduate student mentee]. Annual International Multisensory Research Forum, Toronto, ON, Canada. *Also presented at the Vanderbilt Bill Wilkerson Center for Otolaryngology and Communication Sciences Combined Poster Session, Nashville, TN, United States (2019, April).*
- Woynaroski, T., Santapuram, P., Feldman, J. I., Bowman, S. M., Augustine, A. E., Golden, A. J., Suzman, E., Broderick, N., Keceli-Kaysili, B., Cascio, C., J., Wallace, M. T., & Lewkowicz, D. J. (2018, June). Looking and language: Eye gaze patterns correlate with vocal complexity and language development in infants at high- and low-risk for autism spectrum disorder [Paper presentation]. In E. Tenenbaum (Chair), *Audiovisual speech processing and language development in typical and atypical populations?* [Symposium]. International Congress on Infant Studies 21st Biennial Congress, Philadelphia, PA, United States.
- Feldman, J. I., De Niear, M. A., Conrad, J. G., Kuang, W., Tu, A., Cassidy, M., Liu, Y., Simon, D. M., Wallace, M. T., & Woynaroski, T. (2018, November). *Relations between the McGurk effect, communication, and autism symptom severity in children with ASD* [Poster presentation by graduate student mentee]. American Speech-Language-Hearing Association Annual Convention, Boston, MA, United States. *Also presented at the Intellectual and Developmental Disabilities Research Center Director's Meeting, Boston, MA, United States (2018, November).*
- Bottema-Beutel, K., Crowley, S., Kim, S. Y., Augustine, A. E., Feldman, J. I., Keceli-Kaysili, B., Bowman, S. M., Santapuram, P., Golden, A. J., Broderick, N., Cascio, C., J. & Woynaroski, T. (2019, March). *The stability of joint engagement states in infant siblings of children with ASD: Implications for measurement practices* [Poster presentation]. Society for Research in Child Development Biennial Meeting, Baltimore, MD, United States.
- Woynaroski, T., Feldman, J. I., Edmunds, S. R., Simon, D. M., Tu, A., Kuang, W., Conrad, J. G., Santapuram, P., Broderick, N., & Wallace, M. T. (2019, March). Audiovisual speech processing and attention are linked with language in children with and without autism [Paper presentation by graduate student mentee]. In J. T. Todd & L. E. Bahrack (Chairs), *Advances in the study of attention: Individual differences, developmental trajectories, and relations with outcomes* [Symposium]. Society for Research in Child Development Biennial Meeting, Baltimore, MD, United States.
- Cassidy, M., Feldman, J. I., Liu, Y., Broderick, N., Wallace, M. T., & Woynaroski, T. (2019, April). *Relations between sensory responsiveness and broader symptomatology in children with and without autism* [Poster presentation]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Antonio, TX, United States. *Also*

- presented at the Vanderbilt Bill Wilkerson Center for Otolaryngology and Communication Sciences Combined Poster Session, Nashville, TN, United States (2019, April).*
- Dunham, K., Feldman, J. I., Cassidy, M., Liu, Y., Suzman, E., Mahbub, P., Conrad, J. G., Simon, D. M., Tu, A., Broderick, N., Wallace, M. T., & Woynaroski, T. (2019, April). *Stability of metrics of audiovisual integration in children with autism spectrum disorder* [Poster presentation by graduate student mentee]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Antonio, TX, United States. *Also presented at Vanderbilt Kennedy Center Science Day, Nashville, TN, United States (2019, September).*
- Feldman, J. I., Cassidy, M., Conrad, J. G., Dunham, K., Kuang, W., Liu, Y., Simon, D. M., Tu, A., Wallace, M. T., & Woynaroski, T. (2019, April). *Audiovisual multisensory integration in children with autism spectrum disorder: Associations with broader symptomatology* [Poster presentation by graduate student mentee]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Antonio, TX, United States. *Also presented at Vanderbilt Kennedy Center Science Day, Nashville, TN, United States (2019, September).*
- Raj, S., Feldman, J. I., Augustine, A. E., Bowman, S. M., Daly, C. M., Dunham, K., Golden, A. J., Santapuram, P., Suzman, E., Crowley, S., Kim, S. Y., Bottema-Beutel, K., Broderick, N., Kirby, A., Keceli-Kaysili, B., Cascio, C. J. & Woynaroski, T. (2019, April). *Parent-child engagement and sensory responsiveness in infants at high risk for autism spectrum disorder* [Poster presentation by undergraduate student mentee]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Antonio, TX, United States. *Also presented at Vanderbilt Kennedy Center Science Day, Nashville, TN, United States (2019, September).*
- Santapuram, P., Feldman, J. I., Dunham, K., Suzman, E., Augustine, A. E., Bowman, S. M., Golden, A. J., Keceli-Kaysili, B., Broderick, N., Cascio, C. J., Lewkowicz, D. J., & Woynaroski, T. (2019, April). *Links between looking and vocal development in infants at high and low risk for autism spectrum disorder* [Poster presented by medical student mentee]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Antonio, TX, United States.
- Woynaroski, T., Cascio, C. J., Feldman, J. I., Raj, S., Augustine, A. E., Bowman, S. M., Daly, C. M., Dunham, K., Golden, A. J., Santapuram, P., Suzman, E., Broderick, N., Kirby, A., & Keceli-Kaysili, B. (2019, April). *Preliminary results of the Sensory Project in Infant Siblings: Early sensory responsiveness is linked with communication development in infants at risk for autism* [Poster presentation]. Annual Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Antonio, TX, United States. *Also presented at the Vanderbilt Bill Wilkerson Center for Otolaryngology and Communication Sciences Combined Poster Session, Nashville, TN, United States (2019, April).*
- Broderick, N., Cascio, C. J., Feldman, J. I., Raj, S., Augustine, A. E., Bowman, S. M., Daly, C. M., Dunham, K., Golden, A. J., Santapuram, P., Suzman, E., Kirby, A., Keceli-Kaysili, B. & Woynaroski, T. (2019, May). *Preliminary results of the Sensory Project in Infant Siblings: Early sensory responsiveness is linked with communication development in infants at risk for autism* [Poster presentation]. International Society for Autism Research Annual Meeting, Montreal, QC, Canada.
- Cascio, C. J., Bryant, L. K., Woynaroski, T., Wallace, M. T., Williams, Z. J., Davis, S. L., Gerdes, M. B., & Okitondo, C. D. (2019, May). *Lessons from psychophysical studies of somatic sensation in autism*. In S. A. Green (Chair), *Promise and limitations of multi-modal measurement of sensory processing in autism* [Symposium]. International Society for Autism Research Annual Meeting, Montreal, QC, Canada.

- Sandbank, M., Bottema-Beutel, K., & Woynaroski, T. (2019, May). Project AIM: Autism early intervention meta-analysis [Poster presentation]. International Society for Autism Research Annual Meeting, Montreal, QC, Canada.
- Woynaroski, T., Feldman, J. I., Bush, C., & Yoder, P. J. (2019, May). *ImPACT reduces social hyporesponsiveness and translates to more optimal spoken language outcomes infants at heightened risk for autism* [Poster presentation]. International Society for Autism Research Annual Meeting, Montreal, QC, Canada.
- Daly, C. M., Feldman, J. I., Keceli-Kaysili, B., Bowman, S. M., Santapuram, P., Dunham, K., Golden, A. J., & Woynaroski, T. (2019, September). *Automated vocalizations of infants at high- and low- risk for ASD: A proposed stability and validity study* [Poster presentation by undergraduate student mentee]. Vanderbilt Kennedy Center Science Day, Nashville, TN, United States.
- Suzman, E., Feldman, J. I., Damiano-Goodwin, C., Ibañez, L. V., Stone, W. L., Cascio, C. J. & Woynaroski, T. (2019, September). *Differences in sensory responsiveness predict later play skills in infants at high risk for autism* [Poster presentation by graduate student mentee]. Vanderbilt Kennedy Center Science Day, Nashville, TN, United States.
- Feldman, J. I., Keceli-Kaysili, B., Cassidy, M., Liu, Y., Dunham, K., Bowman, S. M., Golden, A. J., Santapuram, P., Raj, S., Daly, C. M., Suzman, E., Broderick, N., Kirby, A., Cascio, C. J., Wallace, M. T., & Woynaroski, T. (2019, November). *Sensory processing in infants and children with ASD & its relation to language* [Conference presentation]. American Speech-Language-Hearing Association Annual Convention, Orlando, FL, United States.
- Pruett, D. G., Feldman, J. I., Woynaroski, T., Walden, T. A., & Jones, R. M. (2019, November). *Value-added predictors of changes in fluency in young children who do and do not stutter* [Poster presentation] American Speech-Language-Hearing Association Annual Convention, Orlando, FL, United States. *Also presented at Vanderbilt Kennedy Center Science Day, Nashville, TN, United States (2019, September).*
- Feldman, J. I., Daly, C. M., Santapuram, P., Bowman, S. M., Dunham, K., DiCarlo, G. E., Suzman, E., Keceli-Kaysili, B., & Woynaroski, T. (2020, March). *The stability and validity of automated indices of vocal development in infants at high- and low-risk for ASD* [Poster presentation]. Meeting on Language in Autism, Durham, NC, United States (Conference cancelled).
- Woynaroski, T., Cascio, C. J., Feldman, J. I., Raj, S., Augustine, A. E., Bowman, S. M., Daly, C. M., Dunham, K., Garla, V., Golden, A. J., Santapuram, P., Suzman, E., Williams, K. L., Kirby, A. V., & Keceli-Kaysili, B. (2020, March). *Language development is associated with sensory responsiveness in infants at risk for autism* [Poster presentation]. Meeting on Language in Autism, Durham, NC, United States (Conference cancelled).
- Faila, M. D., Schwartz, K., Chaganti, S., Woynaroski, T., Cutting, L. E., Landman, B., & Cascio, C. J. (2020, April). *Characterizing medical comorbidity prior to autism diagnosis in children before age two* [Poster presentation]. Association for Clinical and Translational Science Annual Meeting, Washington, DC, United States. (Conference cancelled).
- Daly, C. M., Feldman, J. I., Santapuram, P., Bowman, S. M., Dunham, K., DiCarlo, G. E., Suzman, E., Keceli-Kaysili, B., & Woynaroski, T. (2020, April). *The stability and validity of automated indices of vocal development in infants at high- and low-risk for ASD* [Poster presentation]. Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States (Conference cancelled).
- Liu, Y., Feldman, J. I., Wallace, M. T., Lewkowicz, D. J., & Woynaroski, T. (2020, April). *Atypical multisensory integration is linked with immature gaze patterns across groups of children with and without autism spectrum disorder* [Poster presentation]. Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States (Conference cancelled). *Also presented at Vanderbilt Kennedy Center Science Day, Nashville, TN, United States (2019, September).*

- Suzman, E., Feldman, J. I., Damiano-Goodwin, C. R., Keceli-Kaysili, B., Bowman, S. M., Daly, C. M., Dunham, K., Garla, V., Muhumuza, A., Raj, S., Williams, Z. J., Williams, K. L., Ibañez, L. V., Kirby, A. V., Stone, W. L., Cascio, C. J. & Woynaroski, T. (2020, April). *Early differences in sensory responsiveness predict poor play skills in infants at high- and low-risk for autism* [Poster presentation]. Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States (Conference cancelled).
- Raj, S., Feldman, J. I., Augustine, A. E., Bowman, S. M., Daly, C. M., Dunham, K., Garla, V., Golden, A. J., Muhumuza, A., Santapuram, P., Suzman, E., Crowley, S., Kim, S. Y., Bottema-Beutel, K., Keceli-Kaysili, B., & Woynaroski, T. (2020, April). *Parent-child engagement predicts later social symptomatology in infants at high risk for autism spectrum disorder* [Poster presentation]. Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States (Conference cancelled).
- Williams, Z. J., Feldman, J. I., Dunham, K., Suzman, E., Liu, Y., Davis, S. L., Mash, L. E., Heflin, B. H., Schauder, K. B., Foss-Feig, J. H., Cascio, C. J., & Woynaroski, T. (2020, April). *The measurement and clinical correlates of decreased sound tolerance (hyperacusis) in autism spectrum disorder* [Paper presentation]. Gatlinburg Conference on Research and Theory in Intellectual Disabilities, San Diego, CA, United States (Conference cancelled).
- Dunham, K., Keceli-Kaysili, B., Golden, A. J., Santapuram, P., Feldman, J. I., & Woynaroski, T. (2020, May). *Neural responses to audiovisual speech in infants at-risk for autism spectrum disorder: An ERP pilot study* [Electronic poster presentation]. International Society for Autism Research Annual Meeting, Seattle, WA, United States.
- Shafai, F. L., Scheerer, N., Feldman, J. I., Gateman, E., Altourn, E., Iarocci, G., Woynaroski, T., Stevenson, R. A., & Montenegro, J. (2020, May). *Pupil dilation responses in autism: The impact of emotional category and intensity* [Poster presentation]. International Society for Autism Research Annual Meeting, Seattle, WA, United States (Conference canceled).
- Key, A., Roth, S., Keceli-Kaysili, B., & Woynaroski, T. (2021, March). *Neural markers of infant auditory learning during early development* [Paper presentation]. In *Studying the neonatal and infant brain: From neuroscience to interventions* [Symposium]. Cognitive Neuroscience Society Virtual Meeting, Davis, CA, United States.
- Benítez-Barrera, C. R., Thompson, E. C., Feldman, J. I., Davis, H., Keceli-Kaysili, B., Roman, A., Dunham, K., Woynaroski, T., Picou, E., & Tharpe, A. M. (2021, April). *RM systems improve cortical and behavioral responses to speech-in-noise in youth with autism* [Poster presentation]. American Academy of Audiology Virtual Conference, Reston, VA, United States.
- Abdelmessih, P. G., Feldman, J. I., Simon, D. M., Wallace, M. T., & Woynaroski, T. (2021, April). *Neural correlates of audiovisual multisensory integration in youth with and without autism* [Poster presentation]. Gatlinburg Conference on Research and Theory in Intellectual Disabilities (Virtual), Kansas City, MO, United States.
- Dunham, K., Feldman, J. I., Edmunds, S. R., Simon, D. M., Tu, A., Kuang, W., Conrad, J. G., Santapuram, P., Cassidy, M., Liu, Y., Wallace, M. T., & Woynaroski, T. (2021, April). *Audiovisual speech processing and language are linked in children with autism spectrum disorder* [Poster presentation]. Gatlinburg Conference on Research and Theory in Intellectual Disabilities (Virtual), Kansas City, MO, United States.
- Feldman, J. I., Dunham, K., DiCarlo, G. E., Cassidy, M., Liu, Y., Suzman, E., Williams, Z. J., Pulliam, G., Wallace, M. T., & Woynaroski, T. (2021, April). *Multisensory perceptual training in youth with autism: A randomized controlled trial* [Poster presentation]. Gatlinburg Conference on Research and Theory in Intellectual Disabilities (Virtual), Kansas City, MO, United States.
- Markfeld, J., Feldman, J. I., Bordman, S., Daly, C., Santapuram, P., Keceli-Kaysili, B., & Woynaroski, T. (2021, April). *Associations between parental stress and depressive*



- symptoms and language and communication outcomes in infant siblings of children with and without autism* [Poster presentation]. Gatlinburg Conference on Research and Theory in Intellectual Disabilities (Virtual), Kansas City, MO, United States.
- Pulliam, G., Feldman, J. I., Liu, Y., Terrebonne, E., Abdelmessih, P. G., & Woynaroski, T. (2021, April). *Audiovisual multisensory integration in individuals with reading and language impairments: A systematic review and meta-analysis* [Poster presentation]. Gatlinburg Conference on Research and Theory in Intellectual Disabilities (Virtual), Kansas City, MO, United States.
- Santapuram, P., Feldman, J. I., Raj, S., Augustine, A. E., Bowman, S. M., Suzman, E., Keceli-Kaysili, B., Bottema-Beutel, K., Lewkowicz, D. J., & Woynaroski, T. (2021, April). *Parent-child engagement mediate association between eye gaze patterns and prelinguistic development in infant siblings of children with and without ASD* [Poster presentation]. Gatlinburg Conference on Research and Theory in Intellectual Disabilities (Virtual), Kansas City, MO, United States.
- Crowley, S., Sandbank, M., Bottema-Beutel, K., & Woynaroski, T. (2021, May). The quality of studies in autism early intervention research [Paper presentation]. In M. Sandbank (Chair), *The state of autism intervention research for young children* [Symposium]. International Society for Autism Research Annual Meeting (Virtual), Boston, MA, United States.
- Faila, M. D., Feldman, J. I., Cascio, C. J., & Woynaroski, T. (2021, May). Sex-differences in pain behaviors and related health in autistic children and adults in the SPARK cohort [Paper presentation]. International Society for Autism Research Annual Meeting (Virtual), Boston, MA, United States.
- Sandbank, M., Crowley, S., Bottema-Beutel, K., & Woynaroski, T. (2021, May). The influence of intensity and implementer on intervention effectiveness [Paper presentation]. In M. Sandbank (Chair), *The state of autism intervention research for young children* [Symposium]. International Society for Autism Research Annual Meeting (Virtual), Boston, MA, United States.
- Williams, Z. J., Feldman, J. I., & Woynaroski, T. (2021, May). Examining the hierarchical structure of parent-reported sensory features in autism using bifactor models [Poster presentation]. International Society for Autism Research Annual Meeting (Virtual), Boston, MA, United States.
- Woynaroski, T., Sandbank, M., Bottema-Beutel, K., & Crowley, S. (2021, May). Participant characteristics that influence the effectiveness of intervention [Paper presentation]. In M. Sandbank (Chair), *The state of autism intervention research for young children* [Symposium]. International Society for Autism Research Annual Meeting (Virtual), Boston, MA, United States.
- Bush, C., Ladanyi, E., Boorom, O., Wang, Y., Woynaroski, T., Lense, M. D., & Gordon, R. L. (2021, June). *Family GAMEs – Can a baby’s neural response inform us about future language development?* [Poster presentation]. Symposium on Research in Child Language Disorders Annual Meeting (Virtual), Madison, WI, United States.
- Ladanyi, E., Bush, C., Boorom, O., Wang, Y., Woynaroski, T., Lense, M. D., & Gordon, R. L. (2021, June). *Do parent musicality and rhythm skills and home music environment predict infant vocabulary development?* [Poster presentation]. Symposium on Research in Child Language Disorders Annual Meeting (Virtual), Madison, WI, United States. Also presented at the *Rhythm Production and Perception Workshop Biennial Meeting, Oslo, Norway (Virtual, 2021, June)*.

## Research Support – Ongoing

U54 HD83211-02  
NIH/NICHD

5/01/2016-5/01/2021

Sensory and Multisensory Contributions to Autism

Recent changes to diagnostic criteria recognize sensory differences as “core characteristics” of ASD. This research project aims to a) characterize alterations in sensory and multisensory function and the associated brain networks that contribute to the social communication deficits in ASD; b) explore associations between (multi)sensory function and social and communication abilities; c) describe the differences in the neural processes and networks subserving sensory and multisensory function in ASD, with a focus on a key multisensory ‘hub’ in temporal cortex, and d) develop novel remediation tools in children and young adults with ASD ages 5-21.

Role: Key Personnel [PI: Neul]

DP2HD098859  
NIH

9/30/2018-6/30/2023

Biomarkers of Rhythmic Communication: Integrating Foundational and Translational Approaches  
Rhythm is a key element to human communication, but its biological and cognitive roles have received little attention from the communication disorders field until very recently. This New Innovator award proposes to characterize biomarkers of human rhythm skills at multiple levels (genome, neural oscillations, behavioral, and familial) in order to deepen understanding of the role of rhythm sensitivity in language acquisition. This interdisciplinary series of high-risk, high-reward studies has the potential to shift paradigms for identification, diagnosis, and treatment of childhood communication disorders.

Role: Collaborator [PI: Gordon]

RM0035

12/01/2018-5/01/2021

Simons Foundation

Understanding the Genetic Basis of Sensory Differences in Families Affected by Autism Spectrum Disorder (ASD)

Differences in sensory function represent an endophenotype of ASD - an intermediate behavioral phenotype that arises from genetic variations and produces cascading effects on development across domains, ultimately yielding the broader constellation of characteristics that has conventionally been associated with ASD. Emerging work from human studies and a large animal literature suggests that sensory differences are heritable. The purpose of the present study is to advance our understanding of the genetic basis of sensory differences in ASD by utilizing the rich SPARK (Simons Foundation Powering Autism Research for Knowledge) database.

Role: PI

Nancy Lurie Marks Foundation

1/1/2019-12/31/2021

Sensory Functions in Autism Spectrum Disorders

This multi-site, multi-project consortium represents an interdisciplinary collaboration of laboratories across the United States (Thomas Jefferson University, Vanderbilt University Medical Center, Syracuse University, University of Pennsylvania/CHOP, University of California, University of Southern California, Johns Hopkins/Kennedy Krieger Institute) focused on elucidating the nature of sensory function in persons with autism across the lifespan. Dr. Woynaroski’s team will be spearheading an integrative data analysis of cross-laboratory data to test a proposed neurodevelopmental model of sensory features in ASD.

Role: Co-I [PI: Schaaf]

Frist Center for Autism and Innovation

1/1/2020-12/31/2020

Increasing Identification of Autistic Adults: A Foundational Frist Center Project

The proposed project will advance our understanding of ASD incidence in adults, unveil links between diagnosis and academic and vocational success, and elucidate predictors of confirmed ASD diagnosis. Doing so will increase autistic individuals' understanding of their unique profile of strengths and weaknesses and facilitate their access to services, guide our collective efforts towards development of innovative technologies and workplace practices, and thereby potentially improve the long-term outcomes of adults known or suspected to have ASD.

Role: PI

Phonak

1/1/2020-12/31/2020

Remote Microphone Systems in Autism Spectrum Disorder

This innovative project represents a preliminary test of remote microphone systems (RMS) in children with autism spectrum disorder. Results are expected to provide increased empirical support for the use of RMS systems, to yield insights into the subgroup/s for whom this novel technology is most likely to be efficacious, and to unveil the neural mechanisms by which this intervention influences speech in noise perception, language comprehension, on-task behavior, and listening stress in children with ASD.

Role: Co-I [PI: Tharpe]

### **Research Support – Concluded**

1R01DC01376-01

9/01/2014-8/31/2019

NIH/NIDCD

Efficacy of Parent-Implemented Treatment in Infant Siblings of Children with ASD

This project is examining the efficacy of an inexpensive home-based early intervention for children at risk for autism spectrum disorders (ASD) focused on early communicative development; this early cost-effective program is part of an Incremental Treatment Approach that proposes to identify which at-risk children would versus would not need more intensive treatment.

Role: Key Personnel [PI: Yoder]

CTSA Clinical Research Mentored KL2

10/01/2015 – 9/30/2018

NIH/CTSA

Temporal Facilitation of Audiovisual Speech Processing & Language in Kindergarteners with ASD (TALK ASD)

Children with ASD are highly heterogeneous, especially in terms of their ability to use language to communicate. This federally-funded KL2 award is intended to promote Dr. Woynaroski's development of an independent, translational line of research (a) identifying brain and behavior factors that explain individual differences in language ability and (b) testing whether such factors are plastic and thus potentially treatable in young children with ASD. The TALK ASD project specifically aims to examine whether EEG/ERP metrics of multisensory processing map onto spoken language ability in kindergarten-aged children with ASD.

Role: PI

Vanderbilt Institute for Clinical and Translational Research Pilot Award 12/10/2015 – 5/31/2017  
Sensory Project in Infant/Toddler Siblings of Children with Autism

Infant siblings of children who are diagnosed with autism spectrum disorder (Sibs-ASD) are at heightened risk for ASD and other language and communication impairments. This pilot project, initially funded via an internal clinical and translational research pilot award and presently supported as an R21, examined the extent to which early sensory responsivity (a) differs in Sibs-ASD relative to infant siblings of typically developing children (Sibs-TD), and (b) predicts later language and social communication ability in high versus relatively lower-risk groups.

Role: Co-I

1R21DC016144-01  
NIH/NIDCD

4/01/2017 - 3/31/2020

Sensory Project in Infant/Toddler Siblings of Children with Autism (Project SPIS)

It has been proposed that early differences in sensory responsiveness may arise from atypical brain states and produce “cascading effects” on social communication and language ability. The Sensory Project in Infant/Toddler Siblings of Children with Autism (Project SPIS) represents a preliminary test of the “cascading effects” framework in infant and toddler siblings of children with autism spectrum disorder (ASD), who are at high (twenty-fold) risk for a future diagnosis of ASD as well as other language and communication disorders. This innovative and interdisciplinary project may facilitate earlier identification of social communication and language impairments and point towards novel targets of “preventative” interventions, thereby improving long-term outcomes of children who are diagnosed with, or at risk for, ASD.

Role: PI

VKC Director’s Strategic Priorities Grant Award

1/10/2018 – 6/30/2018

MADCAP: Multisensory Stimulation and Data Capture Tool

Autism Spectrum Disorder (ASD) is a common and costly neurodevelopmental disorder. In this proposal, we will develop, and validate the use of, a novel technological platform designed by the investigative team that can provide audio, visual, and tactile stimuli - individually and in coordination - to infants in order to identify early potential markers associated with later ASD diagnosis as well as atypical sensory processing. This methodology, if successful, is expected to contribute to radically different paradigms for early detection and intervention as early as the first year of life.

Role: Co-I

## **Research Supervision/Mentoring**

### Postdoctoral Fellows

1. Jacob Feldman, CCC-SLP  
Research Fellow, Hearing & Speech Sciences  
Primary Mentor/Advisor 2020-  
Primary Mentor on Internal (VICTR) grant 2020

### Graduate Students

1. Jacob Feldman, CCC-SLP  
PhD Student, Hearing & Speech Sciences  
Primary Mentor/Advisor 2017-2020 (see above for postdoctoral fellow mentoring)  
Member of Committee, PhD Predissertation Project, 2016  
Chair of Committee, PhD Predissertation Project, 2017  
Chair of Committee, Comprehensive Examination, 2018  
Chair of Committee, Dissertation, 2020  
Director of Independent Studies in Hearing and Speech Sciences  
Noteworthy Achievements: 2019 Department of Hearing and Speech Publication Award

2. Kacie Dunham  
PhD Student, Neuroscience  
Primary Mentor/Advisor 2018-present  
Primary Mentor on Internal (VICTR) grant 2019

Noteworthy Achievements: First author publication selected as 2020 Research Highlight by American Association on Intellectual and Developmental Disabilities

3. Zachary Williams

PhD Student, Medical Scientist Training Program  
Primary Mentor/Advisor 2019-present  
Primary Mentor on Internal (VICTR) grant 2020

5. Jennifer Markfeld

MS-SLP, Hearing and Speech Sciences  
PhD Student, Hearing & Speech Sciences  
Primary Mentor/Advisor 2019-present  
Primary Mentor on Internal (VICTR) grant 2020  
Chair of Committee, Masters Thesis, 2021  
Noteworthy Achievements: 2019 ASHA Graduate Student Scholarship

6. Samantha Bordman

MS-SLP, Hearing and Speech Sciences  
Primary Mentor/Advisor 2019-present

6. Evan Suzman

MS Student, Biomedical Sciences  
Primary Mentor/Advisor 2019-present

7. Carlos Benítez-Barrera

PhD Student, Hearing & Speech Sciences  
Member of Committee, PhD Predissertation Project, 2017

8. Tonia Davis, CCC-SLP

PhD Student, Hearing & Speech Sciences  
Member of Committee, Comprehensive Examination, 2017

9. Amy Harbison

PhD Student, Special Education  
Member of Committee, Comprehensive Examination, 2017  
Member of Committee, Dissertation, 2018

10. Kathryn Slaboch, CCC-SLP

PhD Student, Hearing & Speech Sciences  
Member of Committee, PhD Predissertation Project, 2017

11. Travis Moore, CCC-A

PhD Student, Hearing & Speech Sciences  
Member of Committee, Comprehensive Examination, 2017

12. Elizabeth Fuller

PhD Student, Special Education  
Member of Committee, Comprehensive Examination, 2017  
Member of Committee, Dissertation, 2018

13. Jena McDaniel, CCC-SLP  
PhD Student, Hearing & Speech Sciences  
Member of Committee, Comprehensive Examination, 2017  
Member of Committee, Dissertation, 2019

13. Emily Thompson  
AuD Student, Hearing & Speech Sciences  
Member of Committee, Capstone Project, 2018

14. Alison Hessling, CCC-SLP  
PhD Student, Hearing & Speech Sciences  
Member of Committee, Comprehensive Examination, 2019  
Member of Committee, Dissertation, 2020

15. Jenna Crank  
PhD Student, Special Education, University of Texas at Austin  
Member of Committee, Dissertation, 2020

16. Jennifer Quinde  
PhD Student, Neuroscience  
Member of Committee, Comprehensive Examination, 2019  
Chair of Committee, Dissertation, 2020

17. Talia Liu  
MS-SLP, Hearing and Speech Sciences, Vanderbilt University  
Member of Committee, Masters Thesis, 2022

18. Kaitlyn Hamers  
MS-SLP, Hearing and Speech Sciences, Vanderbilt University  
Member of Committee, Masters Thesis, 2022

#### Undergraduate Students

1. Alex Tu  
Neuroscience, Music  
Primary Research Mentor 2015-2018  
Primary Mentor of Internal (VICTR) grant 2016  
Primary Mentor of VUSR Summer Research Program Award  
Director of Independent Studies in Neuroscience  
Current Position: Medical Student (MD), University of Nebraska 2018 (Full Tuition Scholarship)

2. Wayne Kuang  
Neuroscience; Corporate Strategy  
Primary Research Mentor 2015-2017  
Director of Independent Studies in Neuroscience  
Current Position: Medical Student (OD), Western University of Health Sciences 2018

3. Julie Conrad  
Neuroscience; Medicine, Health, and Society  
Primary Research Mentor 2015-2018



Director of Independent Studies in Neuroscience  
Current Position: Medical Student (MD), University of Illinois at Chicago 2018

4. Pooja Santapuram  
Neuroscience, Child Development  
Primary Research Mentor 2016-2018  
Primary Mentor of Internal (VICTR) grant 2016  
Primary Mentor of VUSRP Summer Research Program Award 2017  
Primary Mentor on Internal (VICTR) grant 2018  
Advisor of Undergraduate Honors Thesis Project (Student received Highest Honors)  
Director of Independent Studies in Neuroscience  
Current Position: Medical Student (MD), Vanderbilt University School of Medicine 2018

5. Sarah Bowman  
Medicine, Health, and Society; Psychology  
Primary Research Mentor 2016-2018  
Primary Mentor of Research Project Laraine Masters Glidden Undergraduate Travel Award from the Gatlinburg Conference on Intellectual and Developmental Disabilities 2016  
Primary Mentor of University of Georgia Medical Partnership Summer Research Externship Award at VUMC 2019  
Current Position: Medical Student (MD), University of Georgia 2018

6. Kacie Dunham  
Neuroscience  
Primary Research Mentor 2017-2018 (see above for graduate student mentoring)  
Primary Mentor on Internal (VICTR) grant 2018  
Current Position: Neuroscience PhD Student (PhD), Vanderbilt University 2018

7. Ashley Augustine  
Biological Sciences  
Primary Research Mentor 2017-2018  
Current Position: Medical Student (MD), Case Western Reserve University 2018

8. Alexandra Golden  
Child Studies; Medicine, Health, and Society  
Primary Research Mentor 2017-2019  
Primary Mentor on Internal (VICTR) grant 2018  
Director of Independent Study in Medicine, Health, and Society  
Current Position: Medical Student (MD), Vanderbilt School of Medicine 2019

9. Evan Suzman  
History (of Scientific Theory); Child Development  
Primary Research Mentor 2017-2019 (see above for graduate student mentoring)  
Primary Mentor, Autism Science Foundation Undergraduate Research Award  
Primary Mentor, Vanderbilt Student Athlete Research Award  
Director of Independent Studies in Psychology  
Current Position: Masters Student (MS), Vanderbilt University Master's Program in Biomedical Sciences 2019

10. Margaret Cassidy  
Neuroscience; Math

Director of Independent Studies in Neuroscience  
Primary Mentor on Internal (VICTR) grant 2018  
Primary Research Mentor 2017-2019  
Current Position: Research Assistant, National Institutes of Health

11. Yupeng Liu  
Neuroscience  
Primary Research Mentor 2017-present  
Director of Independent Studies in Neuroscience  
Primary Mentor on Internal (VICTR) grant 2019  
Primary Mentor of VUSRP Summer Research Program Award 2019  
Current Position: Medical Student (MD), Washington University

12. Sweeya Raj  
Biological Sciences  
Primary Research Mentor 2017-present  
Primary Mentor on Internal (VICTR) grant 2018  
Director of Independent Studies in Neuroscience  
Primary Mentor of VUSRP Summer Research Program Award 2019  
Advisor of Undergraduate Honors Thesis Project (Student received Highest Honors)

13. Claire Daly  
Psychology; Spanish  
Director of Independent Studies in Psychology  
Primary Research Mentor 2017-present  
Primary Mentor on Internal (VICTR) grant 2019  
Current Position: Masters Student (MS), Vanderbilt Master's Program in Speech Language Pathology 2020

14. Aster Samuel  
Neuroscience; Medicine, Health, and Society  
Director of Independent Study in Neuroscience  
Primary Research Mentor 2017-2018

15. Aine Muhumuza  
Neuroscience; French  
Director of Independent Studies in Neuroscience  
Primary Research Mentor 2018-present

16. Emily Terrebonne  
Neuroscience  
Director of Independent Study in Neuroscience  
Primary Research Mentor 2018-2019

17. Grace Hurley  
Biology Pre-Health (Belmont University)  
Director of Independent Study in Psychology  
Primary Research Mentor 2018-present

18. Prachy Mahbub

Neuroscience; Religion (Mount Holyoke College)  
Primary Research Mentor 2018 (Summer Intensive Experience)  
Current Position: Data Analyst, Harvard University

19. Varsha Garla  
Neuroscience  
Director of Independent Studies in Neuroscience  
Primary Research Mentor 2019-present  
Primary Mentor on Internal (VICTR) grant 2019

20. Peter Abdelmessih  
Neuroscience  
Director of Independent Studies in Neuroscience  
Primary Research Mentor 2019-present

21. Grace Pulliam  
Neuroscience  
Primary Research Mentor 2019-present  
Director of Independent Study in Neuroscience

22. Nisha Mailapur  
Pre-Medicine  
Primary Research Mentor 2020-present  
Primary Mentor for SYBBURE Searle Undergraduate Research Program

23. Sophie Kaiser  
Cognitive Studies; Medicine, Health, and Society  
Primary Research Mentor 2020-present

#### High School Students

1. Lawand Yaseen  
School for Science and Math at Vanderbilt  
Primary Research Mentor 2016-2017

#### **References**

C. Melanie Schuele, PhD, CCC-SLP  
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