

Matthew G. Wisniewski – Curriculum Vitae

(last updated 3/24/2024)

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DOB: May 19th, 1984

*invited talk, +invited paper, ^graduate co-author, !undergraduate co-author

Education

- Ph.D. in Cognitive Psychology; 2013; University at Buffalo, The State University of New York; Supervisor: Eduardo Mercado III
- B.A. in Psychology; 2007; University at Buffalo, The State University of New York

Positions

Current

- Associate Professor (August 2018 -); Psychological Sciences, Kansas State University, Manhattan, KS

Long-term

- Postdoctoral Research Psychologist (June 2013 – July 2018); Battlespace Acoustics, 711th Human Performance Wing, Air Force Research Laboratory, Wright-Patterson Air Force Base, OH; Supervisors: Nandini Iyer, Brian D. Simpson

Visiting / Short-term

- Visiting Researcher (July 2019); U.S. Air Force Research Laboratory, Wright-Patterson AFB, OH
- Visiting Faculty (January 2017 – May 2017); Department of Psychology, University of Richmond, VA
- Visiting Postdoctoral Researcher (Summer 2015); Auditory Cognition Research Unit, Max Planck Institute for Human and Cognitive Brain Sciences, Leipzig, Germany; Supervisor: Jonas Obleser
- Visiting Graduate Student Researcher (Summer: 2009, 2010, 2011, 2012); Swartz Center for Computational Neuroscience, Institute for Neural Computation, University of California, San Diego; Supervisor: Scott Makeig
- Adjunct Faculty (August 2012 – December 2012); Department of Animal Behavior, Ecology, & Conservation, Canisius College, Buffalo, NY
- Adjunct Faculty (June 2012 – December 2012); Department of Psychology, University at Buffalo, The State University of New York, Buffalo, NY

Theses

- Ph.D. – “Generalization in Auditory Perceptual Learning: Experimental and Theoretical Perspectives”
- Pre-dissertation – “Learning-related Shifts in Generalization Gradients for Complex Sounds”

Awards

- Journal of Experimental Psychology: Human Perception and Performance Editor's Choice Article Award (2023)
- Oak Ridge Institute for Science and Education Internship (2013; 2015-2016)
- Bugelski Award for excellence in dissertation research (2012)
- Griffith Award for best student paper at annual Southern Society for Philosophy & Psychology meeting (2012)
- Rice Award for early career excellence in research (2011)
- Southern Society for Philosophy & Psychology Student Travel Award (2010)

Grants Awarded

- K-State Open Access Publishing Fund Award. Role: Primary Author (2024). "Finding tau rhythms in EEG: an independent component analysis (ICA) approach" (\$1,500)
- R03 National Institute for Occupational Safety and Health (NIOSH). Role: PI (2023-2025). "Listening while wearing hearing protection: performance dynamics, choice to wear, and impacts of training" 1R03 OH012318-01A1. (\$152,000)
- K-State Open Access Publishing Fund Award. Role: Primary Author (2022). "Familiarization with meaningless sound patterns facilitates learning to detect those patterns among distracters" (\$1,500)
- R01 National Institutes of Health (NIH). Role: Co-I (2023-2026). "The role of prior knowledge and event segmentation in age- and Alzheimer's-related changes in event memory" 5R01AG075012-02 (\$806,143)
- Cognitive and Neurobiological Approaches to Plasticity (CNAP) Project Grant. Role: PI (2022 - 2025). "The role of prestimulus brain dynamics in auditory memory". (\$653,722)
- K-State College of Arts and Sciences Strategic Investment Award (2022). (\$7,500)
- Ball Aerospace Award. Role: PI (2021). "ADMIRE - EEG approaches to augment human multi-modal perception" (\$14,498)
- Cognitive and Neurobiological Approaches to Plasticity (CNAP) Pilot Grant. Role: PI (2020-2022). "Auditory alpha rhythms: an independent components analysis (ICA) approach" (\$289,123)
- Cognitive and Neurobiological Approaches to Plasticity (CNAP) Pilot Grant. Role: PI (2019-2020). "Optimizing auditory training for beneficial outcomes" (\$38,000)
- K-State University Small Research Grant. Role: PI (2019-2020). "Training auditory skills to reduce mental effort during listening" (\$4,985)
- U.S. Air Force Chief Scientist's Office Seedling Grant. Role: PI "Sensing pre-stimulus electroencephalogram features for the purpose of effective human-machine interaction" (\$100,000)
- National Research Council fellowship. Role: PI (2013-2015). "Electrophysiological correlates of listening and learning" (\$154,000); Contract# FA9550-12-D-0001
- University at Buffalo Mark Diamond Grant. Role: PI (2012-2013) "Auditory perceptual learning and generalization" (\$1875)
- NSF Science of Learning Center funded small grants. Roles: PI (2009-2013) "Human and nonhuman learning and generalization" (\$4000)
- NSF Science of Learning Center funded small grant. Role: Co-PI (2010-2011) "Age-related differences in auditory perceptual learning" (\$1500)

Grants Pending

- NSF Science of Learning and Augmented Intelligence. Role: PI (3 years). "Impacts of auditory perceptual learning that extend beyond perception: working memory skills and cortical dynamics" (\$583,787 requested)

Refereed Publications

- 39) ^Tollefsrud, M.A., ^Joyner, C.J., Zakrzewski, A.C., & **Wisniewski, M.G.** (in press). Not fully remembered, but not forgotten: interfering sounds worsen but do not eliminate representation of pitch in working memory. *Attention, Perception, & Psychophysics*. [K-STATE DATA](#)
- 38) **Wisniewski, M.G.**, ^Joyner, C.J., Zakrzewski, A.C., & Makeig, S. (2024). Finding tau rhythms in EEG: an independent component analysis (ICA) approach. *Human Brain Mapping*, 45, e26572. [K-STATE DATA](#)
- 37) +**Wisniewski, M.G.**, & Zakrzewski, A.C. (2023). Effortful listening produces both enhancement and suppression of alpha in the EEG. *Auditory Perception & Cognition*, 6, 289-299. [K-STATE DATA](#)
- 36) Zakrzewski, A.C., Maniscalco, B., & **Wisniewski, M.G.** (2023). Late ERP correlates of confidence for auditory categorization of complex sounds. *Neuroscience Letters*, 137294. [K-STATE DATA](#)
- 35) **Wisniewski, M.G.**, & ^Tollefsrud, M. (2023). Auditory short-term memory for pitch loses precision over time. *Journal of the Acoustical Society of America: Express Letters*, 3, 034402. [K-STATE DATA](#)
- 34) **Wisniewski, M.G.**, ^Joyner, C.J., Zakrzewski, A.C., & !Anguiano, A. (2023). Learning to detect sounds in noise: active top-down selection and stable change in signal representations. *Journal of Experimental Psychology: Human Perception and Performance*, 49, 428-440. [K-STATE DATA](#); [Editor's Choice Article](#)
- 33) Ball, N.J., **Wisniewski, M.G.**, Simpson, B.D., & Mercado, E., III (2022). The impacts of training on change deafness and build-up in a flicker task. *PLoS ONE*, 17, e0276157.
- 32) **Wisniewski, M.G.** (2022). Familiarization with meaningless sound patterns facilitates learning to detect those patterns among distractors. *Frontiers in Psychology*, 13, 957389. [K-STATE DATA](#)
- 31) **Wisniewski, M.G.**, Zakrzewski, A.C., ^Bell, D.R., & !Wheeler, K. (2021). EEG spectral dynamics associated with listening in adverse conditions. *Psychophysiology*, 58, e13877. [K-STATE DATA](#)
- 30) **Wisniewski, M.G.**, & Zakrzewski, A.C. (2020). Effects of auditory training on low-pass filtered speech perception and listening-related cognitive load. *Journal of the Acoustical Society of America*, 148, EL394-EL400. [K-STATE DATA](#)
- 29) **Wisniewski, M.G.**, ^Ball, N.J., Zakrzewski, A.C., Iyer, N., Thompson, E.R., & Spencer, N. (2020). Auditory detection learning is accompanied by plasticity in the auditory evoked potential. *Neuroscience Letters*, 721, 134781.
- 28) **Wisniewski, M.G.**, Church, B.A., Mercado, E., III, & Zakrzewski, A.C. (2019). Easy-to-hard effects in perceptual learning depend upon the degree to which initial trials are "easy". *Psychonomic Bulletin & Review*, 26, 1889-1895. [K-STATE DATA](#)
- 27) ^Ball, N.J., **Wisniewski, M.G.**, Iyer, N., & Simpson, B.D. (2019). Event-related potential and behavioral correlates of deafness to change in the identity and location of objects in auditory scenes. *Auditory Perception & Cognition*, 2, 1-20.
- 26) Zakrzewski, A.C., Williams, H.L., **Wisniewski, M.G.**, & Berry, J.M. (2019). Artificial neural networks reveal individual differences in metacognitive monitoring ability. *PLoS ONE*, 14, e0220526.

- 25) ^Hansen, N.E., Harel, A., Iyer, N., Simpson, B.D., & **Wisniewski, M.G.** (2019). Pre-stimulus brain state predicts auditory pattern identification accuracy. *Neuroimage*, 199, 512-520.
- 24) Zakrzewski, A.C., **Wisniewski, M.G.**, Iyer, N., Simpson, B.D. (2019). Confidence tracks sensory- and decision-related ERP dynamics during auditory detection. *Brain & Cognition*, 129, 49-58.
- 23) **Wisniewski, M.G.**, Iyer, N., Thompson, E.R., & Simpson, B.D. (2018). Sustained frontal midline theta enhancements during effortful listening track working memory demands. *Hearing Research*, 358, 37-41.
- 22) **Wisniewski, M.G.**, Thompson, E.R., & Iyer, N. (2017). Theta- (4-8 Hz) and alpha-power (8-13 Hz) enhancements in the electroencephalogram as an auditory delayed match-to-sample task becomes impossibly difficult. *Psychophysiology*, 54, 1916-1928.
- 21) ^Ball, N.J., **Wisniewski, M.G.**, Zakrzewski, A.C., ^Seccia, A., Iyer, N., Simpson, B.D., Thompson, E.R., & Spencer, N. (2017). Learning-related improvements in auditory detection sensitivities correlate with neural changes observable during active and passive processing of sounds. *Proceedings of Meetings on Acoustics*, 30, 050012.
- 20) Mercado, E., III, **Wisniewski, M.G.**, Macintosh, B., Guillette, L.M., Hahn, A.H., & Sturdy, C.B. (2017). Chickadee songs provide hidden clues to singers' locations. *Animal Behavior and Cognition*, 4, 301-303.
- 19) **Wisniewski, M.G.**, Radell, M.L., Church, B.A., & Mercado, E., III (2017). Benefits of fading in perceptual learning are driven by more than dimensional attention. *PLoS ONE*, 12, e0180959.
- 18) **Wisniewski, M.G.** (2017). Predicting favorable and unfavorable consequences of perceptual learning: worsening and the peak shift. *Experimental Brain Research*, 235, 1233-1245.
- 17) **Wisniewski, M.G.** (2017). Indices of effortful listening can be mined from existing electroencephalographic data. *Ear & Hearing*, 38, e69-e73.
- 16) **Wisniewski, M.G.**, Romigh, G.R., Kenzig, S.M., Iyer, N., Simpson, B.D., Thompson, E.R., & Rothwell, C. (2016). Enhanced auditory spatial performance using individualized head-related transfer functions: an event-related potential study. *Journal of the Acoustical Society of America*, 140, EL539-EL544.
- 15) **Wisniewski, M.G.**, Thompson, E.R., Iyer, N., Estep, J.R., Goder-Reiser, M., & Sullivan, S. (2015). Frontal midline θ power as an index of listening effort. *NeuroReport*, 26, 94-99.
- 14) **Wisniewski, M.G.**, Mercado, E., III, Church, B.A., Gramann, K., & Makeig, S. (2014). Brain dynamics that correlate with effects of learning on auditory distance perception. *Frontiers in Neuroscience*, 8, 396.
- 13) **Wisniewski, M.G.**, Church, B.A., & Mercado, E., III (2014). Individual differences in acquisition predict dynamics of generalization. *Behavioural Processes*, 104, 26-34.
- 12) DeLong, C.M., Heberle, A.L., **Wisniewski, M.G.**, & Mercado, E., III (2014). The ability to recognize objects from dolphin (*Tursiops Truncatus*) echoes generalizes across multiple orientations in humans and neural networks. *Animal Cognition*, 17, 543-557.
- 11) **Wisniewski, M.G.**, Liu, E.H., Church, B.A., & Mercado, E., III (2014). Learning to discriminate frequency modulation rate can benefit and worsen pitch acuity. *Journal of the Acoustical Society of America*, 135, EL55-EL60.

- 10) Church, B.A., Mercado, E., III, **Wisniewski, M.G.**, & Liu, E.H. (2013). Temporal dynamics in auditory perceptual learning: Impact of sequencing and incidental learning. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 39, 270-276.
- 9) **Wisniewski, M.G.**, Mantell, J.T., & Pfordresher, P.Q. (2013). Transfer effects in the vocal imitation of speech and song. *Psychomusicology: Music, Mind, & Brain*, 23, 82-99.
- 8) Mercado, E., III, **Wisniewski, M.G.**, McIntosh, B., Guillette, L.M., & Sturdy, C.B. (2013). Reverberlocation in chickadees? *Proceedings of Meetings on Acoustics*, 19, 010043.
- 7) **Wisniewski, M.G.**, DeLong, C.M., Heberle, A.L., & Mercado, E., III (2013). Exploring the capacity of neural networks to recognize objects from dolphin echoes across multiple orientations. *Proceedings of Meetings on Acoustics*, 19, 010035.
- 6) **Wisniewski, M.G.**, Bartone, A., Coutinho, M.V.C, Hastrup, J., Simms, L.J., & Geer, M. (2013). How soon they forget: Changes to beliefs after learning about tobacco. *Psychology, Health, & Medicine*, 18, 552-557.
- 5) **Wisniewski, M.G.**, Mercado, E., III, Gramann, K., & Makeig, S. (2012). Familiarity with speech affects cortical processing of auditory distance cues and increases acuity. *PLoS ONE*, 7, e41025.
- 4) **Wisniewski, M.G.**, Radell, M.L, Guillette, L.M., Sturdy, C.B., & Mercado, E., III (2012). Predicting shifts in generalization gradients with perceptrons. *Learning & Behavior*, 40, 128-144.
- 3) **Wisniewski, M.G.**, Guillette, L.M., Radell, M.L., Sturdy, C.B., Mercado, E., III (2011). Simulating the temporal dynamics of learning-related shifts in generalization with a single-layer perceptron. In L. Carlson, C. Hölscher, & T. Shipley (Eds.), *Proceedings of the 33rd Annual Conference of the Cognitive Science Society*. Boston, MA: Cognitive Science Society.
- 2) **Wisniewski, M.G.**, Church, B.A., & Mercado, E., III (2010). Temporal dynamics of generalization and representational distortion. *Psychonomic Bulletin & Review*, 17, 809-814.
- 1) **Wisniewski, M.G.**, Church, B.A., & Mercado, E., III (2009). Learning-related shifts in generalization gradients for complex sounds. *Learning & Behavior*, 37, 325-335.

Manuscripts in Progress

^Joyner, C.N., **Wisniewski, M.G.** (submitted). ERP correlates of the peak shift. [K-STATE DATA](#)

+**Wisniewski, M.G.**, Mercado, E., III, & Church, B.A. (submitted). You made it too easy: Simulating the impacts of initial discrimination difficulty on easy-to-hard effects in auditory perceptual learning. [K-STATE DATA](#)

Church, B.A., Rodgers, J.D., Jackson, B.N., **Wisniewski, M.G.**, Moppert, S., Lopata, C., Thomeer, M.L., & Mercado, E., III (submitted). Perceptual Discrimination Learning in Children with and without Autism Spectrum Disorder: The Effect of Feedback, Modality, and Progressive-Learning.

^Tollefsrud, M., & **Wisniewski, M.G.** (in prep). Auditory memory matching along multiple dimensions. [K-STATE DATA](#)

Wisniewski, M.G., Mercado, E., III, & Church, B.A. (in prep). Simulating easy-to-hard effects in auditory and visual perceptual category learning. [K-STATE DATA](#)

Talks

***Wisniewski, M.G.** (July, 2023). EEG dynamics associated with cognitive resource allocation during listening. Presented at the 14th Annual Applied Human Factors and Ergonomics Conference, San Francisco, CA. [K-STATE DATA](#)

***Wisniewski, M.G.** (April, 2023). Oscillatory EEG dynamics associated with effortful listening. Presented at SUNY Buffalo Cognitive Science Colloquium, Buffalo, NY. [K-STATE DATA](#)

***Wisniewski, M.G.** (December, 2022). Analysis of auditory alpha (tau rhythms) in EEG data. Presented at Knowledge, Discovery, and Database Seminar for K-State College of Engineering, Manhattan, KS. [K-STATE DATA](#)

***Wisniewski, M.G.** (November, 2022). Analysis of auditory alpha (tau rhythms) in EEG data. Presented at UC San Diego Music Cognition Research Group Meeting. [K-STATE DATA](#)

Wisniewski, M.G., ^Joyner, C.N., Zakrzewski, A.C., & Makeig, S. (November, 2022). Analysis of auditory alpha (tau rhythms) in the EEG. Paper presented at the 21st Auditory Perception, Cognition, and Action Meeting, Boston, MA. [K-STATE DATA](#)

***Wisniewski, M.G.** (June, 2019). An introduction to basic neural network concepts. Paper presented at the Methods for Analyzing Sound and Modeling Auditory Plasticity (MASMAP) workshop, University at Buffalo, NY.

***Wisniewski, M.G.** (June, 2019). Pre-stimulus brain state predicts perception. Paper presented at University at Buffalo Cognitive Science Colloquium, University at Buffalo, NY.

Wisniewski, M.G. (April, 2018). Perspectives on listening effort from the electroencephalogram (EEG). Paper presented at the 2018 Collaborative Auditory Vestibular Research Network (CAVRN) Meeting, Wright-Patterson AFB, OH.

Wisniewski, M.G., Hansen, N.E., Iyer, N., Simpson, B.D., & Harel, A. (February, 2018). The phase of pre-stimulus ~6-10 Hz EEG oscillations predicts auditory pattern recognition performance. Paper presented at the 41st Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, CA.

Ball, N.J., **Wisniewski, M.G.,** Iyer, N., & Simpson, B.D. (November, 2017). Deafness to space and identity change in auditory scenes: an event-related potential study. Paper presented at the 16th Annual Auditory Perception, Cognition, and Action Meeting, Vancouver, Canada.

Wisniewski, M.G., Radell, M.R., Church, B.A., & Mercado, E., III (March, 2017). Benefits of fading in perceptual learning are driven by more than dimensional attention. Paper presented at the 2017 Meeting of the Southern Society for Philosophy and Psychology, Savannah, GA.

***Wisniewski, M.G.** (various months, 2017). Brain dynamics associated with effortful listening and experience-related effects on auditory perception. Invited paper presented at Kansas State University, Utah State University, Iowa State University, & University of North Carolina, Charlotte.

***Wisniewski, M.G.** (April, 2015). Cortical dynamics during listening. Paper presented at the 711th Human Performance Wing external tech review, Wright-Patterson Air Force Base, OH.

***Wisniewski, M.G.** (March, 2015). Electroencephalographic markers of a listening brain: Effort, performance, and trial-by-trial variability. Paper presented at the 711th Human Performance Wing Applied Neuroergonomics Branch Call, Wright-Patterson Air Force Base, OH.

Wisniewski, M.G. (November, 2014). The Frontal Midline θ rhythm as a psychophysiological index of listening effort. Paper presented at the 13th Annual Auditory Perception, Cognition, and Action Meeting, Long Beach, CA.

Wisniewski, M.G., Mercado, E., III, & Church, B.A. (November, 2013). Generalization of auditory learning to an untrained dimension. Paper presented at the 54th Annual Meeting of the Psychonomic Society, Toronto, ON.

Mercado, E., III, **Wisniewski, M.G.,** McIntosh, B., Guillette, L.M., & Sturdy, C.B. (November, 2013). Can chickadees use echoes to coordinate their actions? Fall Meeting of the Comparative Cognition Society, Toronto, ON.

***Wisniewski, M.G.** (October, 2013). Learning-related generalization shifts: Experimental and theoretical perspectives. Presented at the AFRL Cognitive Modeling Brown Bag, Dayton, OH.

***Wisniewski, M.G.,** DeLong, C.M., Heberle, A.L., Mercado, E., III (June, 2013). Exploring the capacity of neural networks to recognize objects from dolphin echoes across multiple orientations. Paper presented at the 2013 International Congress on Acoustics, Montreal, CA.

***Wisniewski, M.G.,** Mercado, E., III, & Church, B.A. (May, 2013). Predicting individual differences in learning-related generalization shifts. Paper presented at the Society for the Quantitative Analysis of Behavior, Minneapolis, MN.

Mercado, E., III, **Wisniewski, M.G.,** McIntosh, B., Guillette, L.M., & Sturdy, C.B. (March, 2013). Chickadees may use passive echolocation to monitor singers' positions. Presented to area of Ecology, Evolution, & Behavior, Buffalo, NY.

***Wisniewski, M.G.** (January, 2013). EEG correlates of auditory learning: Past and proposed research. Paper presented at the Air Force Research Laboratory, Dayton, OH.

Jarinska, K., **Wisniewski, M.G.** (August, 2012). Modeling and Analysis: The Ziggerans Project. Paper presented at the TDLC Summer Fellows Institute, San Diego, CA.

Wisniewski, M.G. (August, 2012). Caricature-like effects in the auditory modality: A computational model of dynamic representation. Paper presented at the TDLC Summer Fellows Institute, San Diego, CA.

***Wisniewski, M.G.** (June, 2012). A case for representational reorganization in learning about sounds on a continuum. Paper presented at the SUNY Buffalo Behavioral and Brain Sciences Symposium, Buffalo, NY.

Wisniewski, M.G., Church, B.A., & Mercado, E., III (March, 2012). Individual learning proficiencies predict dynamics of shifts in generalization. Paper presented at the 104th Annual Meeting of the Southern Society for Philosophy and Psychology, Savannah, GA.

Wisniewski, M.G. (January, 2012). Learning-related shifts in generalization. Paper presented at the TDLC fellow retreat, San Diego, CA.

Wisniewski, M.G., Gramann, K., Mercado, E., III, & Makeig, S. (November, 2011). Familiarity with speech affects cortical processing of auditory distance cues and increases acuity. Paper presented at the 10th annual Auditory, Perception, Cognition, & Action Meeting, Seattle, WA.

Wisniewski, M.G., Church, B.A., Liu, E.H., & Mercado, E., III (March, 2011). Using progressive training to facilitate perceptual learning. Paper presented at the 4th Annual Inter-Science of learning Center (iSLC) Student and Post-Doc Conference, Washington, D.C.

Mercado, E., III, & **Wisniewski, M.G.** (January, 2011). Temporal dynamics of learning-related shifts in generalization. Paper presented at the 2011 All Hands Meeting of the TDLC, San Diego, CA.

Wisniewski, M.G., Church, B.A., & Mercado, E., III (March, 2010). Temporal dynamics of peak shifts in generalization. Paper presented at the 102nd Annual Meeting of the Southern Society for Philosophy and Psychology, Atlanta, GA.

Wisniewski, M.G. (August, 2008). Progressive training and the spacing effect. Paper presented at the retreat for sensory-motor and interactive memory systems networks of the Temporal Dynamics of Learning Center, Monterey, CA.

Posters

^Bell, T.J., !Anguiano, A., !Krehbiel, K., Zakrzewski, A.C., **Wisniewski, M.G.**, & Bailey, H. (November, 2022). Neural oscillations differentiate effective and less effective strategies. Paper presented at the 2022 meeting of the Psychonomic Society. Boston, MA. [K-STATE DATA](#)

^Joyner, C.N., & **Wisniewski, M.G.** (November, 2022). ERP correlates of auditory peak shifts in stimulus generalization. Paper presented at the 2022 Auditory Perception, Cognition, and Action Meeting. Boston, MA. [K-STATE DATA](#)

^Tollefsrud, M.A., & **Wisniewski, M.G.** (November, 2022). Accuracy and precision of reproduced short-term memories. Paper presented at the 2022 Auditory Perception, Cognition, and Action Meeting. Boston, MA. [K-STATE DATA](#)

Church, B.A., Jackson, B.N., **Wisniewski, M.G.**, Rodgers, J.D., Lopata, C., Mercado, E., III (November, 2021). The effect of progressive learning on auditory perceptual learning: a child appropriate conceptual replication. Paper presented at the 2021 Meeting of the Psychonomic Society. Remote.

^Joyner, C.N., & **Wisniewski, M.G.** (November, 2021). An ERP investigation of auditory perceptual learning's generalization and retention. Paper presented at the 2021 Auditory Perception, Cognition, and Action Meeting. Remote. [K-STATE DATA](#)

^Howatt, B.C., **Wisniewski, M.G.** & Young, M.E. (September, 2021). Trial-Level Changes in Reward Positivity during a Competitive Game: An EEG Analysis using Multilevel Modeling. *Poster presentation at Society for Neuroeconomics*. Remote. [K-STATE DATA](#)

Ball, N.J., **Wisniewski, M.G.**, Simpson, B.D., & Mercado, E., III (November, 2020). Neural and behavioral correlates of change detection following training with complex auditory scenes. Paper presented at the 177th Meeting of the Acoustical Society of America. Remote.

- Wisniewski, M.G.** (November, 2019). Impacts of pre-stimulus brain state on auditory performance. Paper presented at the 2019 Auditory Perception, Cognition, and Action Meeting, Montreal, CA. [K-STATE DATA](#)
- Zakrzewski, A.C., ^Ball, N.J., Bell, D., Wheeler, M., & **Wisniewski, M.G.** (November, 2019). Confidence, learning, and metacognitive accuracy tracks auditory ERP dynamics. Paper presented at the 2019 Auditory Perception, Cognition, and Action Meeting, Montreal, CA. [K-STATE DATA](#)
- Pitts, B.L., Zakrzewski, A.C., Bailey, H.R., & **Wisniewski, M.G.** (November, 2019). Neurophysiological markers of event boundaries in simple narrative stimuli. Paper presented at the 2019 Meeting of the Psychonomic Society, Montreal, CA. [K-STATE DATA](#)
- ^Ball, N.J. **Wisniewski, M.G.**, Simpson, B.D., & Mercado, E., III (May, 2019). Effects of training on sensitivities to spatial changes in auditory scenes. Paper presented at the 175th Meeting of the Acoustical Society of America, Louisville, KY.
- ^Hansen, N., **Wisniewski, M.G.**, Iyer, N., Simpson, B.D., & Harel, A. (May, 2018). The phase of pre-stimulus EEG oscillations predicts auditory pattern recognition performance. Paper presented at the 2nd Annual Neuroergonomics Conference, Philadelphia, PA.
- ^Hansen, N., **Wisniewski, M.G.**, Iyer, N., Simpson, B.D., & Harel, A. (September, 2017). Do oscillatory dynamics of pre-stimulus EEG predict trial-by-trial fluctuations in auditory pattern identification? Paper presented at the 6th International Conference on Auditory Cortex, Banff, Canada.
- ^Ball, N.J., **Wisniewski, M.G.**, Zakrzewski, A.C., ^Seccia, A., Iyer, N., Simpson, B.D., Thompson, E.R., & Spencer, N. (June, 2017). Learning-related improvements in auditory detection sensitivities correlate with changes in sensory- and decision-related components of the event-related potential. Paper presented at the 173rd Meeting of the Acoustical Society of America, Boston, MA.
- Zakrzewski, A.C., **Wisniewski, M.G.**, Iyer, N., & Simpson, B.D. (February, 2017). Metacognitive judgments track sensory- and decision-related components of the event-related potential during auditory detection. Paper to be presented at the 40th Annual Mid-Winter Meeting of the Association for Research in Otolaryngology, Baltimore, MD.
- Spencer, N.J., Thompson, E.R., **Wisniewski, M.G.**, Simpson, B.D., & Iyer, N. (November, 2016). Auditory training and subsequent generalization with speech and non-speech stimuli. Paper presented at the 5th joint meeting of the Acoustical Society of America and Acoustical Society of Japan, Honolulu, Hawaii.
- Wisniewski, M.G.**, Romigh, G.R., !Kenzig, S.M., Iyer, N., Simpson, B.D., Thompson, E.R., & Rothwell, C.D. (May, 2016). Enhanced auditory spatial performance using individualized head-related transfer functions: an event-related potential study. Paper presented at the 171st meeting of the Acoustical Society of America, Salt Lake City, UT.
- Wisniewski, M.G.** (November, 2015). Sustained theta (4-7 Hz) and alpha (8-12 Hz) synchronization in the electroencephalogram during auditory processing: Effects of listening difficulty. Paper presented at the 14th Annual Auditory Perception, Cognition, and Action Meeting, Chicago, IL.
- Wisniewski, M.G.** (June, 2015). Electroencephalographic features during listening: Effort, performance, and trial-to-trial variability. Paper presented at the 3rd Annual Cognitive Hearing Science of Communication Conference, Linköping, Sweden.

- Thompson, E.R., **Wisniewski, M.G.**, Iyer, N., & Simpson, B.D. (May, 2015). Duration and transition effects in multiple-burst, multitone masking. Paper presented at the 169th Meeting of the Acoustical Society of America, Pittsburgh, PA.
- Wisniewski, M.G.** (February, 2015). Psychophysiological correlates of “listening effort” in theta-band EEG. Paper presented at the 38th Annual Mid-Winter Meeting of the Association for Research in Otolaryngology, Baltimore, MD.
- Wisniewski, M.G.** (May, 2014). Frontal midline EEG dynamics as a potential index of listening effort. Poster presented at the 4th Annual Midwestern Cognitive Science Conference, Dayton, OH.
- Wisniewski, M.G.**, Thompson, E.R., Iyer, N., Simpson, B.D., & Sullivan, S.C. (February, 2014). Oscillatory dynamics of EEG correlate with build-up in an informational masking task. Paper presented at the 37th Annual Mid-Winter Meeting of the Association for Research in Otolaryngology, San Diego, CA.
- Mercado, E., III, **Wisniewski, M.G.**, McIntosh, B., Guillette, L.M., & Sturdy, C.B. (October, 2013). Analyzing chickadee songs as a series. Paper presented at National Institute for Mathematical and Biological Syntheses Investigative Workshop, Knoxville, TN.
- Wisniewski, M.G.**, Mercado, E., III, & Church, B.A. (November, 2012). Variations in learning trajectories predict generalization. Poster presented at the 53rd Annual Meeting of the Psychonomic Society, Minneapolis, MN.
- Wisniewski, M.G.**, Church, B.A., & Mercado, E., III (November, 2012). Auditory learning-related shifts in generalization: A case for distortions of representation. Poster presented at the 11th Annual Auditory Perception, Cognition, & Action Meeting, Minneapolis, MN.
- Wisniewski, M.G.** (April, 2012). Predicting Individual differences in generalization. Poster presented at the 5th Annual Inter-Science of learning Center (iSLC) Student and Post-Doc Conference, San Diego, CA.
- Wisniewski, M.G.**, Mercado, E., III, & Church, B.A. (January, 2012). Individual differences in acquisition predict dynamics of generalization in humans and artificial neural networks. Poster presented at the Annual All-Hands Meeting of the Temporal Dynamics of Learning Center, San Diego, CA.
- Wisniewski, M.G.**, Mantell, J.T., Pfordresher, P.Q. (August, 2011). Transfer effects in the vocal imitation of speech and song. Poster presented at the Society for Music Perception and Cognition conference, Rochester, NY.
- Wisniewski, M.G.**, Guillette, L.M., Radell, M.L., Sturdy, C.B., & Mercado, E., III (July, 2011). Simulating the temporal dynamics of learning-related shifts with a single-layer perceptron. Poster presented at the 33rd Annual Conference of the Cognitive Science Society. Boston, MA.
- Liu, E. H., **Wisniewski, M. G.**, Church, B. A., & Mercado, E., III (March, 2011). Auditory perceptual learning through training on a task-irrelevant dimension. Poster presented at the 4th Annual Inter-Science of learning Center (iSLC) Student and Post-Doc Conference, Washington, DC.
- Wisniewski, M.G.**, Church, B.A., & Mercado, E., III (December, 2010). Auditory peak shift. Poster presented at the Annual Science of Learning Centers PI Meeting, Washington, DC.
- Liu, E. H., **Wisniewski, M. G.**, Church, B. A., & Mercado, E., III (November, 2010). Auditory perceptual learning through training on a task-irrelevant dimension. Poster presented at the 51st Annual Meeting of the Psychonomic Society, St. Louis, MO.

Wisniewski, M. G., Church, B. A., Liu, E. H., & Mercado, E., III (November, 2010). Temporal dynamics of auditory perceptual learning: Impact of progressive order. Poster presented at the 51st Annual Meeting of the Psychonomic Society, St. Louis, MO.

Wisniewski, M. G., Church, B. A., Mercado, E., III, & Liu, E. H. (May, 2010). Temporal dynamics in auditory perceptual learning: Impact of order and spacing. Poster presented at the 3rd Annual Inter-Science of Learning Center (iSLC) Student and Post-Doc Conference, Boston, MA.

Wisniewski, M.G., Gramann, K., Mercado, E., III, & Makeig, S. (January, 2010). EEG dynamics associated with the perceptual learning of auditory distance. Poster presented at the Annual All-Hands Meeting of the Temporal Dynamics of Learning Center, San Diego, CA.

Wisniewski, M.G., Church, B.A., Mercado, E., III (November, 2009). Auditory peak shift: The impact of experience. Poster presented at the 50th Meeting of the Psychonomic Society, Boston, MA.

Wisniewski, M.G., Bartone, A.S., Hastrup, J.L., Simms, L.J., & Geer, M. (August, 2009). Altering misinformation about tobacco and nicotine among undergraduate students. Poster presented at the annual convention of the American Psychological Association, Toronto, ON.

Wisniewski, M.G., Church, B.A., & Mercado, E., III (January, 2009). Long-term memory for peak shift. Poster presented at the Annual All-Hands Meeting of the Temporal Dynamics of Learning Center, San Diego, CA.

Church, B.A., Mercado, E., III, & **Wisniewski, M.G.** (November, 2008). Increased acuity after progressive training: Due to progression or variability? Poster presented at the 49th Meeting of the Psychonomic Society, Chicago, IL.

Wisniewski, M.G., Church, B.A., & Mercado, E., III (November, 2008). Peak shift: Is it perceptual learning or a temporary attentional adjustment? Poster presented at the 49th Meeting of the Psychonomic Society, Chicago, IL

Service

Discipline

- Instructor for Methods for Analyzing Sound and Modeling Auditory Plasticity (MASMAP) workshop sponsored by the Estes Foundation, Acoustical Society of America (ASA), University at Buffalo Center for Cognitive Science, and CNAP
- NSF Science of Learning Panel Member
- Academic Editor for: PLoS ONE (2018 - 2020)
- Ad Hoc Journal Reviewer for: Attention Perception & Psychophysics, Auditory Perception & Cognition, Behavioral Neuroscience, Behavioural Brain Research, Behavioural Processes, Biological Psychology, Ear & Hearing, eNeuro, Frontiers in Human Neuroscience, Health Education Research, Journal of Neuroscience Research, New Ideas in Psychology, PLoS ONE, Psychophysiology, SOJ Psychology, The Psychological Record
- Ad Hoc Grant Reviewer for: National Research Council Canada, Action on Hearing Loss Project Grant, Air Force Office of Scientific Research, NSF Science of Learning Program, Zayed University (United Arab Emirates) internal grants
- Ad Hoc Conference Program Reviewer for: Cognitive Science Society, Midwestern Cognitive Science Society, inter-Science of Learning Center Meeting, Temporal Dynamics of Learning Center fellow retreat
- NSF inter-Science of Learning Center (iSLC) conference committee (2010 - 2012)
- Temporal Dynamics of Learning Center (TDLC) fellow committee (2010 - 2012)

- Consultant on electrophysiological recordings for the Dayton Veterans Administration (VA) Hospital, Audiology Clinic

Department

- Space committee (Spring 2023 -)
- Cognitive TMS faculty search committee (Fall 2022)
- SONA research participant pool administrator (2022 -)
- Tech Adviser for Cognitive and Neurobiological Approaches to Plasticity Center (CNAP) EEG research core (2019 - 2022)
- Social/Personality faculty search committee (Fall 2021)
- MIOF director search committee (Fall 2019)
- Psychological Sciences Awards Committee Chair (2020 - 2022)
- Psychological Sciences Awards Committee (2018 -)
- Masters / Preliminary Exam Committees:
 - CJ Joyner (Kansas State University, Manhattan, KS)
 - Destiny Bell (Kansas State University, Manhattan, KS)
 - Brian Howatt (Kansas State University, Manhattan, KS)
 - Natalie Hansen (Wright-State University, Dayton, OH)
 - Maverick Smith (Kansas State University, Manhattan, KS)
 - Hayley Fisher (Kansas State University, Manhattan, KS)
- Guest Lectures
 - General Psychology: *The Psychology of Music* (April, 2023)
- Dissertation Committees:
 - Maverick Smith; graduated (Kansas State University)
 - Hayley Fisher; graduated (Kansas State University)

College/University

- *Dissertation Committees:*
 - Chad Davidson; graduated (Education; Kansas State University)

Courses Taught

- Brain & Behavior (Kansas State University; Fall, 2019)
- Electroencephalography (Kansas State University; Spring, 2019)
- Cognitive Psychology (Kansas State University: Fall, 2018, Spring, 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021; Fall 2021; Spring 2022; Fall 2022; Spring 2023; Fall 2023)
- Methods and Analysis (University of Richmond; Spring 2017)
- Memory (University at Buffalo: Fall 2012)
- Animal Cognition (Canisius College: Fall 2012)
- Biology of Memory (University at Buffalo: Spring and Summer 2012)

Advising/Mentoring

- Undergraduate RAs (sorted descending by recency):
 - Catherine Eyler
 - Isabelle Ehlers
 - Kaitlyn Jones
 - Sarah Bechtel
 - Patty McLain
 - Victoria Valdez

Sophia Valdez
Sami Lashley
Anna Turco
Alexis Anguiano
Jenny Amerin
Molly Killilea
John Pagen
Kayla Cossins
Erin Messer
Raelynn Splike
Francis Guffy
Victoria Robinson
Emma Harmon
Kelly Wilkerson
Kelsey Wheeler
Shay Quigley
Bailey Herring
Max Goder-Reiser (AFRL)
Bryeshia Cooper (AFRL)
Stephanie Kenzig (AFRL)

- Graduate Research Mentorship
 - Alexandria Zakrzewski (AFRL/University at Buffalo)
 - Amanda Seccia (AFRL/University at Buffalo)
 - Natalie Ball (AFRL/University at Buffalo)
 - Natalie Hansen (AFRL/Wright-State University)
- Direct Graduate Advising
 - Chelsea (CJ) Joyner
 - Michael Tollefsrud

Organizational Memberships

- Applied Human Factors and Neuroergonomics Society (2023 -)
- Society for Neuroscience (2018 -)
- Member of the Psychonomic Society (2013 -)
- Auditory Perception Cognition Society (2009 -)
- Acoustical Society of America (2013 – 2014; 2016-2017)
- Society for the Quantitative Analysis of Behavior (2013 - 2015)
- NSF Temporal Dynamics of Learning Center (TDLC) (2008 – 2013)
- Southern Society for Philosophy and Psychology (SSPP) (2009 – 2013; 2017)
- NSF inter-Science of Learning Center (iSLC) (2008 – 2013)
- Student Member of Audio Engineering Society (AES) (2009-2011)

Outreach/Volunteer

- High-school visiting lectures on careers in science: Miami Valley Career and Technology Center, Englewood, OH (2017)
- Making Art with Artificial Neural Networks: Red House Performance Space, Syracuse NY (2012)