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Audiology and Speech Pathology Center
Walter Reed National Military Medical Center
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ACADEMIC POSITIONS

- 2018-Present Research Investigator
Audiology and Speech Pathology Center, Walter Reed National Military Medical Center,
Bethesda, MD
- 2014-2018 Research Assistant Professor
Maryland Neuroimaging Center, University of Maryland, College Park, MD
- 2013-2018 Assistant Research Scientist
Center for Advanced Study of Language, University of Maryland, College Park, MD
- 2009-2013 Postdoctoral Scholar
Mentors: Mark A. Eckert, Ph.D. and Judy R. Dubno, Ph.D.
Hearing Research Program, Medical University of South Carolina, Charleston, SC

EDUCATION

- 2006-2009 Ph.D. in Psychology (Cognitive Division)
Minor in Linguistics/Developmental Psychology
Dissertation: *From Seeing to Saying: Perceiving, Planning, Producing*
Mentor: Kathryn Bock, Ph.D.
University of Illinois, Urbana, IL
- 2003-2006 M.A. in Psychology (Cognitive Division)
Thesis: *Shaping the Link Between Seeing and Saying*
Mentor: Kathryn Bock, Ph.D.
University of Illinois, Urbana, IL
- 1999-2003 B.A. (summa cum laude) in Psychology (with highest honors for thesis) and in Linguistics &
Cognitive Science
Thesis: *Adult Aging and Running Memory Span for Spoken Discourse*
Mentor: Arthur Wingfield, D.Phil.
Brandeis University, Waltham, MA

HONORS AND AWARDS

- 2021 Outstanding Research Accomplishment – Team Award, Military Health System Research
Symposium (Team Lead: D.S. Brungart)
- 2017 Named “Rising Star” at AGS/NIA U13 workshop: *Sensory Impairment & Cognitive Decline*
- 2013-5, 2016-7 NIH Loan Repayment Program Award [NIDCD L30 DC013451]
- 2011 Student travel scholarship for the Aging and Speech Communication Conference
- 2006 Named to University of Illinois’ “Incomplete List of Teachers Ranked as Excellent”
- 2006 Higginson Summer Research Award
- 2005 National Science Foundation’s Language Training Grant Traineeship
- 2003-2004 National Science Foundation’s Graduate Fellowship Honorable Mention
- 2002 National Science Foundation’s Integrative Graduate Education and Research Traineeship
(IGERT) Summer Fellow in Neuroscience at Brandeis University

Research Overview: My research investigates the cognitive and neural systems that support speech and language comprehension in challenging conditions. I conduct behavioral, pupillometry, and neuroimaging studies that aim to assess and improve auditory and cognitive function in a variety of listening environments (e.g., background noise) and for a variety of populations (e.g., older adults with hearing loss; service members and veterans with TBI; school-aged children; and adult second-language learners).

CURRENT GRANT SUPPORT

NIH/NIDCD R01 DC019394 (PI: Simon) 09/17/2021-08/31/2026
Multilevel auditory processing of continuous speech, from acoustics to language
 Role: Other Significant Contributor

NSF Div. Behavioral and Cognitive Science 2020932 (PI: Novick/Kim/Gilley) 09/01/2020-08/31/2023
Direct impacts of executive functions on language comprehension: Evidence from eye movements and electrophysiology
 Role: Other Significant Contributor

US Army Medical Research & Development Command (PI: **Kuchinsky**) 10/01/2019-09/30/2022
The impact of blast exposure on functional impairments in hearing and cognition
 Role: PI

NIH/NIA P01 AG055365 (Prog. Director: Gordon-Salant, Proj. 3 PI: Simon) 09/15/2017-05/31/2022
Neuroplasticity in auditory aging
 Role: co-I (Project 3)

AAMTI Extended Innovation Fund (PI: Brungart) 01/01/2020-12/31/2021
A portable VR-based tool for assessment and rehabilitation of chronic vestibular disorders
 Role: co-I

DARPA, Targeted Neuroplasticity Training Program (PI: O'Rourke, **co-PI: Kuchinsky**)
Enhancing auditory and linguistic learning through peripheral nerve stimulation 04/18/2017-12/17/2021
 Role: co-PI

NIH/NIDCD R03 DC015059 (PI: **Kuchinsky**) 07/06/2016-12/31/2021
Understanding and indexing the neural bases of listening effort
 Role: PI

COMPLETED GRANT SUPPORT

Brain and Behavior Initiative, UMD seed grant (PIs: Puett/**Kuchinsky**) 05/01/2017-12/31/2018
The impact of meditation experience on the brain-body connection: Behavioral, physiological, and neural measures of stress-resilience
 Role: co-PI

Department of Defense, H98230-07-D-0175 (PIs: Haarmann/Bunting) 11/15/2013-11/14/2015
Improved cognitive readiness for language analysis
 Role: Assistant Research Scientist

PUBLICATIONS

*denotes first author student or trainee

Peer-Reviewed Journal Articles

*Phillips, I., Calloway, R. C., Karuzis, V. P., Pandža, N. B., O'Rourke, P., & **Kuchinsky, S. E.** (2021). Transcutaneous auricular vagus nerve stimulation (taVNS) strengthens semantic representations of foreign language tone words during initial stages of learning. *Journal of Cognitive Neuroscience*, 34(1), 127-152.

- *Milvae, K., **Kuchinsky, S. E.**, Stakhovskaya, O., & Goupell, M. (2021). Dichotic listening performance and effort as a function of spectral resolution and interaural symmetry. *Journal of the Acoustical Society of America*, *150*(2), 920-935.
- *Burg E., Thakkar T., Fields T., Misurelli S., **Kuchinsky S. E.**, Roche J., Lee D. J., & Litovsky R. Y. (2021). Systematic comparison of trial exclusion criteria for pupillometry data analysis in individuals with single-sided deafness and normal hearing. *Trends in Hearing*, *25*, 23312165211013256.
- *Hsu, N. S., **Kuchinsky, S. E.**, & Novick J. M. (2021). Direct impact of cognitive control on sentence processing and comprehension. *Language, Cognition, and Neuroscience*, *36*(2), 211-239.
- Kuchinsky, S. E.**, Eitel, M. M., Lange, R. T., French, L. M., Brickell, T. A., Lippa, S. M., & Brungart, D. S. (2020). Objective and subjective auditory effects of traumatic brain injury and blast exposure in Service Members and Veterans. *Frontiers in Neurology*, *11*, 1–9.
- *Kulasingham, J. P., Brodbeck, C., Presacco, A., **Kuchinsky, S. E.**, Anderson, S., & Simon, J. Z. (2020). High gamma cortical processing of continuous speech in younger and older listeners. *Neuroimage*, *222*, 117291.
- *Pandža, N. B., Phillips, I., Karuzis, V. P., O'Rourke, P., & **Kuchinsky, S. E.** (2020). Neurostimulation and pupillometry: New directions for learning and research in applied linguistics. *Annual Review of Applied Linguistics*, *40*, 56-77. doi.org/10.1017/S0267190520000069
- *Ogg, M., Moraczewski, D., **Kuchinsky, S. E.**, & Slevc, L. R. (2019). Separable neural representations of sound sources: Speaker identity and musical timbre. *Neuroimage*, *191*, 116-126.
- Winn, M. B., Wendt, D., Koelewijn, T., & **Kuchinsky, S. E.** (2018). Best practices and advice for using pupillometry to measure listening effort: An introduction for those who want to get started. *Trends in Hearing*, *22*, 233121651880086.
- *McGarrigle, R., Dawes, P., Stewart, A. J., **Kuchinsky, S. E.**, & Munro, K. J. (2017). Measuring listening-related effort and fatigue in school-aged children using pupillometry. *Journal of Experimental Child Psychology*, *161*, 95-112.
- *McGarrigle, R., Dawes, P., Stewart, A. J., **Kuchinsky, S. E.**, & Munro, K. J. (2017). Pupillometry reveals changes in physiological arousal during a sustained listening task. *Psychophysiology*, *54*, 193-203.
- Vaden Jr. K. I., **Kuchinsky, S. E.**, Ahlstrom, J. B., Teubner-Rhodes, S. E., Dubno, J. R., & Eckert, M. A. (2016). Cingulo-opercular function during word recognition in noise for older adults with hearing loss. *Experimental Aging Research*, *42*(1), 67-82. PMID: 26683042
- Kuchinsky, S. E.**, Vaden Jr., K. I., Ahlstrom, J. B., Cute, S. L., Humes, L. E., Dubno, J. R., & Eckert, M. A. (2016). Task-related vigilance during word recognition in noise for older adults with hearing loss. *Experimental Aging Research*, *42*(1), 50-66. PMID: 26683041
- Konopka, A. E. & **Kuchinsky, S. E.** (2015). How message similarity shapes the timecourse of sentence formulation. *Journal of Memory and Language*, *84*, 1-23.
- Vaden Jr., K. I., **Kuchinsky, S. E.**, Ahlstrom, J. B., Dubno, J. R., & Eckert, M. A. (2015). Cortical activity predicts which older adults recognize speech in noise and when. *Journal of Neuroscience*, *35*(9), 3929-3937. PMID: 25740521
- Kuchinsky, S. E.**, Ahlstrom, J. B., Cute, S. L., Humes, L. E., Dubno, J. R., & Eckert, M. A. (2014). Speech-perception training for older adults with hearing loss impacts word recognition and effort. *Psychophysiology*, *51*(10), 1046-1057. PMID: 24909603
- Vaden Jr., K. I., **Kuchinsky, S. E.**, Cute, S. L., Ahlstrom, J. B., Dubno, J. R., & Eckert, M. A. (2013). The cingulo-opercular network provides word recognition benefit. *Journal of Neuroscience*, *33*(48), 18979-18986. PMID: 24285902

Eckert, M. A., **Kuchinsky, S. E.**, Vaden Jr., K. I., Cute, S. L., Spaminato, M. V., & Dubno, J. R. (2013).

White matter hyperintensities predict low frequency hearing in older adults. *Journal of the Association for Research in Otolaryngology*, 14(3), 425-433. PMID: 23512682

Kuchinsky, S. E., Ahlstrom, J. B., Vaden Jr., K. I., Cute, S. L., Humes, L. E., Dubno, J. R., & Eckert, M.A.

(2013). Pupil size varies with word listening and response selection difficulty in older adults with hearing loss. *Psychophysiology*, 50(1), 23-34. PMID: 23157603

Eckert, M. A., Cute, S. L., Vaden Jr., K. I., **Kuchinsky, S. E.**, & Dubno, J. R. (2012). Auditory cortex signs

of age-related hearing loss. *Journal of the Association for Research in Otolaryngology*, 13(5), 703- 713. PMID: 22618352

Kuchinsky, S. E., Vaden Jr., K. I., Keren, N. I., Harris, K. C., Ahlstrom, J. B., Dubno, J. R., & Eckert, M.

A., (2012). Word intelligibility and age predict visual cortex activity during word listening. *Cerebral Cortex*, 22, 1360-1371. PMID: 21862447

Vaden, Jr., K. I., Gebregziabher, M., **Kuchinsky, S. E.**, & Eckert, M.A. (2012). Multiple imputation of

missing fMRI data in whole brain analysis. *NeuroImage*, 60, 1843-1855. PMID: 22500925

Vaden, Jr., K. I., **Kuchinsky, S. E.**, Keren, N. I., Harris, K. C., Ahlstrom, J. B., Dubno, J. R., & Eckert, M. A.

(2011). Inferior frontal sensitivity to common speech sounds is amplified by increasing word intelligibility. *Neuropsychologia*, 49, 3563-2572. PMID: 21925521

Kuchinsky, S. E., Bock, K., & Irwin, D. E. (2011). Reversing the hands of time: Changing the mapping

from seeing to saying. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 37, 748-756. PMID: 21534707

Fallon, M., **Kuchinsky, S.**, & Wingfield, A. (2004). The salience of linguistic clauses in young and older

adults' running memory for speech. *Experimental Aging Research*, 30, 359-371. PMID: 15371100

Peer-Reviewed Conference Papers and Proceedings

Talkar, T., Solomon, N., Brungart, D. S., **Kuchinsky, S. E.**, Eitel, M., Lippa, S., Brickell, T., French, L.,

Lange, R., & Quatieri, T. (2021). Acoustic indicators of speech motor coordination in adults with and without traumatic brain injury. *Proc. Interspeech 2021*, 21-25, doi: 10.21437/Interspeech.2021-1581

Kuchinsky, S. E., Pandža, N. B., & Haarmann, H. J. (2016). Linking indices of tonic alertness: Resting-state

pupil dilation and cingulo-opercular neural activity. In D. D. Schmorrow & C. M. Fidopiastis (Eds.), *LNAI: Vol. 9743. Foundations of Augmented Cognition: Neuroergonomics and Operational Neuroscience* (pp. 218-230). Switzerland: Springer. DOI: 10.1007/978-3-319-39955-3_21

Book Chapters

Kuchinsky, S. E. & Milvae, K. (submitted). Pupillometry in audiology. In M. Papesh & S. Goldinger (Eds.),

Modern Pupillometry: Cognition, Neuroscience, and Practical Applications. Springer.

Teubner-Rhodes, S., & **Kuchinsky, S. E.** (2020). Physiological approaches to listening. In: D. L.

Worthington, & G. D. Bodie (Eds.), *The Handbook of Listening*. Hoboken, NJ: Wiley-Blackwell.

Kuchinsky, S. E., & Vaden Jr., K. I. (2020). Aging, hearing loss, and listening effort: Imaging studies of the

aging listener. In: K. Helfer, E. Bartlett, A. N. Popper, & R. R. Fay (Eds.), *The Aging Auditory System*. New York: Springer.

Kuchinsky, S. E. & Haarmann, H. J. (2019). Neuroscience perspectives on cognitive training. In: M.

Bunting, J. Novick, M. Dougherty, & R. W. Engle (Eds.), *An Integrative Approach to Cognitive and Working Memory Training: Perspectives from Psychology, Neuroscience, and Human Development*. New York: Oxford University Press.

Technical Reports

- *Phillips, I., Calloway, R. C., Karuzis, V. P., Pandža, N. B., Turner, M. S., Lee, J. G. W., O'Rourke, P., **Kuchinsky, S. E.** (2020). *Investigating three parameterizations of taVNS-potentiated short-term neuroplasticity to facilitate Mandarin lexical tone learning: Interim report.* (Technical Report CV 306 Obj. 3.2.2.1.2.1). College Park, MD: University of Maryland Applied Research Laboratory for Intelligence and Security.
- *Phillips, I., Pandža, N. B., Karuzis, V. P., Turner, M. S., McConnel, S. E., Lee, J. G. W., O'Rourke, P., & **Kuchinsky, S. E.** (2019). *tVNS-potentiated short-term neuroplasticity in Chinese Mandarin lexical tone learning: A final report.* (Technical Report CV 306 Obj. 3.1.2.1.2.2). College Park, MD: University of Maryland Applied Research Laboratory for Intelligence and Security.
- Kuchinsky, S. E.,** Karuzis, V. P., Pandža, N. B., Lee, J. G. W., O'Rourke, P. (2018). *tVNS-potentiated short-term neuroplasticity in Chinese Mandarin lexical tone learning: An interim report.* (Technical Report CV 306 Obj. 3.1.2.1.2.1). College Park, MD: University of Maryland Center for Advanced Study of Language.
- Kuchinsky, S. E.,** Hsu, N. S., Pandža, N. B., Brown, N. T., Romberg, A. R., Karuzis, V. P., Novick, J. M., & Haarmann, H. J. (2015). *Neuroimaging approaches to cognitive readiness* (Technical Report DO 0054 Obj. 2.7). College Park, MD: University of Maryland Center for Advanced Study of Language.
- Romberg, A. R., Haarmann, H. J., **Kuchinsky, S. E.,** Li, L., Testut, A., & Robinson, E. (2015). *The role of mind-wandering in analyst-relevant task performance: Evidence from a dual-blind meditation study* (Technical Report DO 0054 Obj. 2.6). College Park, MD: University of Maryland Center for Advanced Study of Language.
- Haarmann, H. J., Romberg, A. R., **Kuchinsky, S. E.,** Karuzis, V. P., Pandža, N. B., Davey, N. S., & Cushen, P. J. (2015). *Using mindfulness training to improve cognition: Increasing time-on-task and improving stress resilience* (Technical Report DO 0054 Obj. 2.2). College Park, MD: University of Maryland Center for Advanced Study of Language.

Professional Magazine

- Kuchinsky, S. E.,** Eckert, M. A., & Dubno, J. R. (2011, Jan/Feb). The eyes are the windows to the ears: Pupil size reflects listening effort. *Audiology Today*, 23, 56-59.

PRESENTATIONSInvited Colloquia (Non-Conference)National and International

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| Oct 2020 | Department of Communication Sciences and Disorders, University of Wisconsin, Madison |
| Sep 2016 | Department of Communication Sciences and Disorders, University of Wisconsin, Madison |
| Apr 2015 | Audiology and Deafness Oticon Research Seminar, University of Manchester, UK |
| Oct 2014 | Aging & Development Brownbag series, Washington University in St. Louis |
| Jul 2014 | Festschrift for Art Wingfield: Aging, Hearing, & Speech Compr., Brandeis University |
| Nov 2010 | Center for Research on Language, University of California, San Diego |
| Jan 2009 | Science and Engineering Expo, Sandia National Laboratories, Albuquerque |

Local

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| Jun 2016 | Audiology and Speech Center, Walter Reed National Military Medical Center, Bethesda |
| Feb 2014 | Department of Hearing and Speech Sciences, University of Maryland, College Park |
| Feb 2014 | LingBrains Seminar, University of Maryland, College Park |
| Feb 2013 | Center for Cognitive Neuroscience, Medical University of South Carolina, Charleston |
| Sep 2011 | Hearing Science Interest Group, Medical University of South Carolina, Charleston |

Jun 2010 Hearing Science Interest Group, Medical University of South Carolina, Charleston
 Apr 2006 Cognitive Division, University of Illinois, Urbana-Champaign

Conference and Workshop Talks

***denotes first author student or trainee**

Kuchinsky, S. E. (2021, November). *Measuring and modulating effortful listening: Developing interventions to address diverse listening challenges*. Talk presented at the ASHA Convention, Washington, DC.

*Calloway, R. C., Decruy, L., Karunathilake, I. M. D., Dunlap, J. L., Anderson, S. A., Simon, J. Z., & **Kuchinsky, S. E.** (2021, August). *Pupil diameter indexes time-course shifts in older adults' sustained listening effort*. Talk presented at the International Symposium on Auditory and Audiological Research (ISAAR), Virtual.

*Karunathilake, I. M. D., Dunlap, J. L., Perera, J., Prosecco, A., Decruy, L., Anderson, S. A., **Kuchinsky, S. E.**, & Simon, J. Z. (2021, August). *The effects of aging on the cortical representation of continuous speech*. Talk presented at the International Symposium on Auditory and Audiological Research (ISAAR), Virtual.

Kuchinsky, S. E., Razeghi, N., & Pandža, N. B. (2021, June). *Words matter: Analyzing lexical effects on recognition and effort using normed word stimuli*. Talk presented at the Acoustical Society of America, Virtual conference.

Kuchinsky, S. E. (2021, June). *Characterizing blast-induced auditory symptoms in U.S. Service Members*. Talk presented at the annual meeting of the Collaborative Auditory & Vestibular Research Network (CAVRN), Virtual conference.

*Decruy, L., Vanthornhout, J., **Kuchinsky, S. E.**, Anderson, S., Simon, J. Z., & Francart, T. (2021, February). *Neural tracking of continuous speech is exaggerated in healthy aging and hearing-impaired adults*. Talk presented at the midwinter meeting of the Association for Research in Otolaryngology, Virtual conference.

Kuchinsky, S. E., Eitel, M. M., Cohen, J. I., Lange, R. T., French, L. M., Brickell, T. A., Lippa, S. M., & Brungart, D. S. (2020, December). *Listening challenges for Service Members and Veterans with Traumatic Brain Injury: The role of sentence context for speech perception in noise*. Talk presented at the Acoustical Society of America: Acoustics Virtually Everywhere, Virtual conference.

Kuchinsky, S. E. (2020, May). *Insights into effort through the eyes, ears, and brain*. Invited talk presented at the Voice Foundation's Virtual Voice Symposium. Virtual conference.

*Pandža, N. B., Karuzis, V., Phillips, I., O'Rourke, P., & **Kuchinsky, S. E.** (2019, September). *The impact of neurostimulation on cognitive effort in Mandarin lexical tone learning: Pupillometry evidence*. Talk presented at the Second Language Research Forum (SLRF), East Lansing, MI.

*Kulasingham, J. P., Brodbeck, C., Presacco, A., **Kuchinsky, S. E.**, Anderson, S., & Simon, J. Z. (2019, September). *High frequency cortical processing of continuous speech in younger and older listeners*. Talk presented at the Auditory EEG Signal Processing (AESoP) Symposium, Leuven, Belgium.

Kuchinsky, S. E. (2019, July). *Acoustic, linguistic, and cognitive factors impact effortful listening: Implications for cochlear implant users*. Invited talk presented at the Conference on Implantable Auditory Prostheses (CIAP), Lake Tahoe, CA.

*Milvae, K. D., **Kuchinsky, S. E.**, & Goupell, M. J. (2019, July). *Dichotic listening performance and effort in bilateral cochlear-implant and normal-hearing listeners*. Talk presented at the Conference on Implantable Auditory Prostheses (CIAP), Tahoe City, CA.

*Pandža, N. B., Phillips, I., Karuzis, V. P., O'Rourke, P., & **Kuchinsky, S. E.** (2019, June). *Non-invasive neurostimulation differentially affects cognitive effort in the processing of L2 Mandarin tone*. Talk

presented at the International Symposium on Bilingualism, Edmonton, Alberta, Canada.

*Pandža, N. B., Karuzis, V. P., O'Rourke, P., & **Kuchinsky, S. E.** (2019, March). *Simply stimulating: How non-invasive neurostimulation can support learning vocabulary with linguistic tone*. Talk presented at the American Association for Applied Linguistics Conference, Atlanta, GA.

Kuchinsky, S. E., Rose, J. S., Rosenberg, R. N., & Marshall-Cort, A. L. (2019, February). *Examining the relationship between pupillary and neural indices of effortful listening*. Talk presented at the midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.

*Brodbeck, C., Presacco, A., **Kuchinsky, S. E.**, Anderson, S., & Simon, J. Z. (2019, February). *Increased speech representation in older adults originates from early response in higher order auditory cortex*. Talk presented at the midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.

*Milvae, K. D., **Kuchinsky, S. E.**, Stakhovskaya, O. A., & Goupell, M. J. (2019, February). *The effect of spectral resolution on dichotic listening performance and effort*. Talk presented at the midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.

*Pandža, N. B., Karuzis, V. P., O'Rourke, P., & **Kuchinsky, S. E.** (2018, September). *Brain stimulation and Mandarin tone learning*. Talk presented at the Languages of Asia LEARN Workshop. Rockville, MD.

*Milvae, K. D., **Kuchinsky, S. E.**, Stakhovskaya, O. A., & Goupell, M. J. (2018, May). *Dichotic listening performance and listening effort for asymmetrical inputs*. Invited talk presented at the annual meeting of the Acoustical Society of America, Minneapolis, MN.

Kuchinsky, S. E. (2018, March). *Effortful listening: The impact of cognitive demands on speech recognition*. Invited keynote talk presented at the Joint Defense Veterans Audiology Conference (JDVAC), Atlanta, GA.

Kuchinsky, S. E. (2017, September). *Listening effort as a multidimensional construct: Insights from aligned pupillometry and neuroimaging methods*. Invited keynote talk presented at the Second Summer Workshop on the Application of Pupillometry in Hearing Science to Assess Listening Effort, VU University Medical Center, Amsterdam, The Netherlands.

Kuchinsky, S. E. (2017, June). *Neuroscience approaches to understanding cortical changes with hearing loss*. Invited talk presented at the IX International Workshop on Advances in Audiology, University of Salamanca, Spain.

Kuchinsky, S. E. (2016, September). *Assessing listening effort: Theoretical and methodological considerations*. Invited panel member and speaker at the World Congress of Audiology, Vancouver, BC.

Kuchinsky, S. E., Pandža, N. B., & Haarmann, H. J. (2016, July). *Linking indices of tonic alertness: Resting-state pupil dilation and cingulo-opercular neural activity*. Invited talk presented at the Human Computer Interaction International Conference, Toronto, ON.

Kuchinsky, S. E., Dubno, J. R., & Eckert, M. A. (2016, May). *Advances in quantifying listening effort: Growth curve analyses of pupillometry data*. Invited talk presented at the spring meeting of the Acoustical Society of America, Salt Lake City, UT.

Kuchinsky, S. E., Ahlstrom, J. B., Cute, S. L., Humes, L. E., Dubno, J. R., & Eckert, M. A. (2015, June). *Pupillometry studies of listening effort: Theoretical and methodological considerations*. Invited talk presented at the Biennial Aging and Speech Communication Conference, Bloomington, IN.

Kuchinsky, S. E., Vaden Jr., K. I., Ahlstrom, J. B., Cute, S. L., Humes, L. E., Dubno, J. R., & Eckert, M. A. (2015, June). *Task-evoked arousal during speech recognition in noise for older adults with hearing loss*. Talk presented at the Third International Conference on Cognitive Hearing Science for Communication, Linköping, Sweden.

Kuchinsky, S. E., Ahlstrom, J. B., Franko-Tobin, E., & Dubno, J. R. (2015, May). *Task demands and*

cognitive abilities impact listening effort for older adult hearing aid users. Invited talk presented at the spring meeting of the Acoustical Society of America, Pittsburgh, PA.

Vaden Jr., K. I., **Kuchinsky, S. E.**, Cute, S. L., Ahlstrom, J. B., Dubno, J. R., & Eckert, M. A. (2014, November). *The cingulo-opercular networks supports word recognition in noise for older adults.* Nanosymposium talk presented at the Society for Neuroscience Conference, Washington, DC.

Eckert, M. A., Dubno, J. R., Harris, K. C., **Kuchinsky, S. E.**, Vaden Jr., K. I. (2013, October). *The importance of adaptive control during word recognition.* Talk presented at the Biennial Aging and Speech Communication Conference, Bloomington, IN.

Konopka, A. E., **Kuchinsky, S. E.**, & Meyer, A. S. (2013, March). *Does message similarity facilitate sentence formulation?* Talk presented at the Annual International Symposium of Psycholinguistics, Canary Islands, Spain.

Gebregziabher, M., Vaden, K. I., **Kuchinsky, S. E.**, & Eckert, M. A. (2012, August). *Dealing with missing fMRI data in whole-brain analysis.* Talk presented at Annual Joint Statistical Meetings, San Diego, CA.

Kuchinsky, S. E. (2012, March). *Neuroimaging studies of hearing loss and hearing-loss intervention.* Invited talk presented at the Annual Meeting of Frontiers in Neuroscience Research Day: Neurodegenerative Disorders, Seabrook, SC.

Kuchinsky, S. E. & Bock, K. (2010, March). *From seeing to saying: Perceiving, planning, producing.* Talk presented at the Annual CUNY Conference on Human Sentence Processing, New York, NY.

Kuchinsky, S. E. (2009, May). *Instant messaging: A new method for collecting and analyzing errors in language production.* Talk presented at the Annual Meeting of the Illinois Language and Linguistics Society, Urbana-Champaign, IL.

Kuchinsky, S. E., Bock, J. K., & Irwin, D. E. (2005, May). *Priming time: An examination of sentence frame development through structural priming of time expressions.* Talk presented at the meeting of the Midwestern Psychological Association, Chicago, IL.

Conference Posters

*Pandža, N. B. & **Kuchinsky, S. E.** (2021, December). *Comparing two deliveries of non-invasive vagus nerve stimulation to enhance auditory category learning.* Poster presented at the International Brain Stimulation Conference, Charleston, SC.

*Karunathilake, I. M. D., Dunlap, J. L., Perera, J., Prosecco, A., Decruy, L., Anderson, S. A., **Kuchinsky, S. E.**, & Simon, J. Z. (2021, November). *The effects of aging on the cortical representation of continuous speech.* Poster presented at the Annual Meeting of the Society for Neuroscience, Chicago, IL.

*Soleimani, B., Karunathilake, I. M. D., Das, P., **Kuchinsky, S. E.**, Babadi, B. & Simon, J. Z. (2021, November). *Network localized granger causality reveals cortical network changes under difficult listening conditions.* Poster presented at the Annual Meeting of the Society for Neuroscience, Chicago, IL.

*Talian, D. S., Eitel, M. M., **Kuchinsky, S. E.**, French, L. M., Bickell, T. A., Lippa, S. M., Lange, R. T., & Brungart, D. S. (2021, September). *Rotational vestibular tests in U.S. Military service members and veterans with and without a history of traumatic brain injury.* Poster presented at the NCRAR Conference on Vestibular Disorders: From Cause to Cure, Portland, OR

Kuchinsky, S. E., Perry, T. T., Chmielenski, K., Horvat, L., & Brungart, D. S. (2021, accepted). *Characterizing the frequency, durations, causes, and long-term implications of blast-induced symptoms in US Service Members.* Accepted for presentation at the Military Health System Research Symposium, Orlando, FL. [conference cancelled]

Brungart, D. S., Kokx-Ryan, M., Russell, S., Schurman, J., Perry, T. T., Sheffield, B., Kulinski, D., Holtzman, R., Swann, A., Dirks, C., Grant, K. W., Phatak, S., **Kuchinsky, S. E.**, Chmielenski, K.,

- Horvat, L., Martorana, R. (2021, accepted). *An integrated approach to discovering, diagnosing, and treating auditory injury in the DoD*. Accepted for presentation at the Military Health System Research Symposium, Orlando, FL. [conference cancelled]
- *Soleimani, B., Das, P., Karunathilake, I. M. D., **Kuchinsky, S. E.**, Babadi, B., & Simon, J. Z. (2021, June). *Network localized granger causality inference: Performance evaluation and application to MEG data*. BRAIN Initiative Investigator's Meeting, Virtual conference.
- *Dunlap, J. L., Karunathilake, I. M. D., Perera, J., Simon, J. Z., **Kuchinsky, S. E.**, & Anderson, S. (2020, November). *Relationships between subjective and objective measures of speech understanding reveal age-related deficits*. Association for Research in Otolaryngology. Virtual conference.
- *Karunathilake, I. M. D., Dunlap, J. L., Perera, J., Presacco, A., Decruy, L., Anderson, S., **Kuchinsky, S. E.**, Simon, J. Z. (2021, February). *Effects of aging on the cortical representation of continuous speech*. Association for Research in Otolaryngology. Virtual conference.
- *Decruy, L., Karunathilake, I. M. D., Dunlap, J. L., Perera, J., Anderson, S., Simon, J. Z., & **Kuchinsky, S. E.** (2020, November). *Pupil dilation, as a continuous measure of listening effort, during sustained attention to competing talkers*. Association for Research in Otolaryngology. Virtual conference.
- *Soleimani, B., Das, P., Karunathilake, I. M. D., **Kuchinsky, S. E.**, Babadi, B., & Simon, J. Z. (2020, November). *Cortical connectivity changes under difficult listening conditions revealed by network localized granger causality*. Advances and Perspectives in Auditory Neuroscience (APAN), Virtual conference.
- *Decruy, L., Karunathilake, I. M. D., Dunlap, J. L., Perera, J., Anderson, S., Simon, J. Z., & **Kuchinsky, S. E.** (2020, November). *Pupil dilation, as a continuous measure of listening effort, during sustained attention to competing talkers*. Advances and Perspectives in Auditory Neuroscience (APAN), Virtual conference.
- *Karunathilake, I. M. D., Dunlap, J. L., Perera, J., Presacco, A., Decruy, L., Anderson, S., **Kuchinsky, S. E.**, & Simon, J. Z. (2020, November). *Effects of aging on the cortical representation of continuous speech*. Advances and Perspectives in Auditory Neuroscience (APAN), Virtual conference.
- *Phillips, I., Karuzis, V. P., Pandža, N. B., O'Rourke, P., **Kuchinsky, S. E.** (2019, October). *Transcutaneous vagus nerve stimulation (tVNS) strengthens semantic encoding during novel tone word learning: Evidence from event-related potentials*. Society for Neuroscience, Chicago, IL.
- *Kulasingham, J. P., Brodbeck, C., Presacco, A., **Kuchinsky, S. E.**, Anderson, S., & Simon, J. Z. (2019, October). *High frequency time-locking in human auditory cortex to continuous speech*. Society for Neuroscience, Chicago, IL.
- Brungart, D. S., Sheffield, B. M., Sherlock, L., Montagne, C., Eitel, M., & **Kuchinsky, S. E.** (2019, August). *The current and potential future roles of hearing conservation programs in monitoring the effects of repetitive blast exposure in military populations*. Military Health System Research Symposium, Kissimmee, FL.
- *Phillips, I., Karuzis, V. P., Pandža, N. B., O'Rourke, P., & **Kuchinsky, S. E.** (2019, May). *Short-term transcutaneous vagus nerve stimulation (tVNS) reduces cognitive anxiety and negative affect for healthy subjects*. Convention of the Association for Psychological Science, Washington, DC.
- *Kulasingham, J. P., Brodbeck, C., Presacco, A., **Kuchinsky, S. E.**, Anderson, S., & Simon, J. Z. (2019, May). *High frequency time locking in auditory cortex to continuous speech*. International Workshop on Statistical Analysis of Neuronal Data (SAND), Pittsburgh, PA.
- *Hsu, N. S., **Kuchinsky, S. E.**, Novick, J. (2019, March). *A causal influence of domain-general cognitive control on sentence comprehension*. CUNY Conference on Human Sentence Processing, Boulder, CO.
- Brungart, D. S., Eitel, M., Cohen, J., Schurman, J., Jenkins, K., Zaleski-King, A., Kokx-Ryan, M., Lange, R. T., French, L. M., Brickell, T. A., Lippa, S. M., & **Kuchinsky, S. E.** (2019, March). *Objective and*

subjective auditory effects in a longitudinal study of service members with Traumatic Brain Injury and blast exposure. National Capital Area TBI Research Symposium, Bethesda, MD.

Misurelli, S., Burg, E., Thakkar, T., Fields, T., **Kuchinsky, S. E.**, & Litovsky, R. (2019, February). *Pupillary studies in individuals with single-sided deafness: Impact of trial inclusion criteria.* Midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.

*Brodbeck, C., Presacco, A., **Kuchinsky, S. E.**, Anderson, S., & Simon, J. Z. (2018, September). *Origins of cortical over-representation of speech in older adults.* Auditory SPLASH Conference. Philadelphia, PA.

*Ogg, M., Moraczewski, D. **Kuchinsky, S. E.**, & Slevc, L. R. (2017, November). *Examining the neural representations of auditory objects: Speaker identify and musical instrument timbre.* Advances and Perspectives in Auditory Neuroscience Annual Symposium, Washington, D.C.

Kuchinsky, S. E., Presacco, A., Anderson, S., Simon, J. Z. (2017, February). *Auditory-cognitive training alters the neural encoding of speech for older adults with normal hearing.* Annual midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.

*Hsu N. S., **Kuchinsky S. E.**, Thomas A., Novick J. M. (2016, November). *Cognitive control engagement from a nonlinguistic source can ease processing along the garden path.* Annual Meeting of the Psychonomic Society, Boston, MA.

Romberg, A. R., Haarmann, H. J., **Kuchinsky, S. E.**, Karuzis, V. P., Pandža, N. B., Davey, N. S., & Cushen, P. J. (2015, November). *Attention monitoring during mindfulness training reduces mind-wandering and increases stress resilience.* Annual Meeting of the Psychonomic Society, Chicago, IL.

*Pandža, N. B., **Kuchinsky, S. E.**, Karuzis, V. P., Haarmann, H. J. (2015, October). *Mindfulness modulates cognitive control during lexical-semantic categorization: fMRI evidence.* Annual Meeting of the Society for the Neurobiology of Language, Chicago, IL.

Vaden Jr., K. I., **Kuchinsky, S. E.**, Ahlstrom, J. B., Dubno, J. R., & Eckert, M. A. (2014, June). *Cingulo-opercular network support for word recognition by older adults.* International Society for Magnetic Resonance in Medicine Workshop on Functional MRI: Emerging Techniques & New Interpretations, Charleston, SC.

Vaden Jr., K. I., **Kuchinsky, S. E.**, Cute, S. L., Ahlstrom, J. B., Dubno, J. R., & Eckert, M. A. (2013, November). *Engagement of the cingulo-opercular system enhances future word recognition.* Neurobiology of Language Conference, San Diego, CA.

Vaden Jr., K. I., **Kuchinsky, S. E.**, Cute, S. L., Ahlstrom, J. B., Dubno, J. R., & Eckert, M. A. (2013, October). *Cingulo-opercular activity predicts subsequent word recognition.* Biennial Aging and Speech Communication Conference, Bloomington, IN.

Konopka, A. E., **Kuchinsky, S. E.**, & Meyer, A. S. (2013, March). *Does message similarity facilitate sentence formulation?* Annual CUNY Conference on Human Sentence Processing, Columbia, SC.

Kuchinsky, S. E., Vaden, K. I., Cute, S. L., Ahlstrom, J. B., Dubno, J. R., & Eckert, M. A. (2013, February). *Word recognition benefit from attention systems in older adults with hearing loss.* Annual midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.

Vaden, K. I., **Kuchinsky, S. E.**, Cute, S. L., Ahlstrom, J. B., Dubno, J. R., & Eckert, M.A. (2012, October). *Anterior insula and frontal operculum support word recognition in younger and older adult.* Annual meeting of the Society for Neuroscience, New Orleans, LA.

Vaden, K.I., Gebregziabher, M., **Kuchinsky, S. E.**, & Eckert, M. A. (2012, March). *Multiple imputation toolkit for group level fMRI statistics.* Annual Frontiers in Neuroscience Research Day: Neurodegenerative Disorders, Seabrook, SC.

Kuchinsky, S. E., Dubno, J. R., Humes, L. E., Ahlstrom, J. B., Cute, S. L., & Eckert, M. A. (2011, October). *Evaluation of pupil size as an indicator of listening effort.* Biennial Aging and Speech Communication

Conference, Bloomington, IN.

Vaden, Jr., K. I., **Kuchinsky, S. E.**, Cute, S. L., Ahlstrom, J. B., Dubno, J. R., & Eckert, M. A. (2011, October). *An fMRI study of age-related changes in sustained attention and word recognition*. Biennial Aging and Speech Communication Conference, Bloomington, IN.

Ahlstrom, J. B., Eckert, M. A., Humes, L. E., Cute, S. L., **Kuchinsky, S. E.**, & Dubno, J. R. (2011, October). *Benefits of speech-perception training for older adults with hearing loss*. Biennial Aging and Speech Communication Conference, Bloomington, IN.

Kuchinsky, S. E., Vaden, Jr., K. I., Keren, N. I., Harris, K. C., Ahlstrom, J. B., Dubno, J. R., & Eckert, M. A. (2010, November). *Word intelligibility and age predict visual cortex activity during word listening*. Annual Meeting of the Society for Neuroscience, San Diego, CA.

Eckert, M. A., **Kuchinsky, S. E.**, Keren, N. I., Conner, C., Vaden, Jr., K. I., Ahlstrom, J. B. & Dubno, J. R. (2010, June). *Sustained inferior frontal activation predicts age-related changes in word recognition*. Annual Meeting of the Organization for Human Brain Mapping, Barcelona, Spain.

Kuchinsky, S. E., Bock, K., & Irwin, D. E. (2008, November). *Reversing the hands of time: Changing the mapping from visual input to linguistic output*. Annual Meeting of the Psychonomic Society, Chicago, IL.

Kuchinsky, S. E., Bock, K., & Irwin, D. E. (2006, August). *Shaping the link between seeing and saying*. International Workshop on Language Production, Chicago, IL.

TEACHING, MENTORING, AND OUTREACH EXPERIENCE

Teaching

Spring 2010 Certificate of completion of MUSC's Teaching Techniques Course

Instructor

Spring 2017 & 2018 Research Design (HESP 724, Graduate course)
Department of Hearing and Speech Sciences, University of Maryland
Capstone Research Project II (HESP 859-2501, Graduate course)
Department of Hearing and Speech Sciences, University of Maryland

Summer 2007 Cognitive Psychology (PSYC 224)
Department of Psychology, University of Illinois

Guest Lectures

Fall 2016, 17, 19 *Psychoacoustics: Listening Effort* (Graduate course)
Department of Hearing and Speech Sciences, University of Maryland

Fall 2016 *Cognitive Neuroscience I: Foundational Readings* (Graduate course)
Neuroscience and Cognitive Science Program, University of Maryland

Spring 2016 *Neural Aptitude for Language: Language Aptitude* (Graduate course)
Second Language Acquisition Program, University of Maryland

Fall 2011, 2012 *fMRI Analysis: Features of Neuroimaging Data; Group-Level Statistics*
Biostatistics: Advanced ANOVA & Regression (Graduate course)
Medical University of South Carolina

Spring 2011 *Aging and Plasticity; Language and the Brain: Behavioral Neuroscience*
College of Charleston

Fall 2010 *Cognitive Neuroscience: Behavioral Neuroscience*

College of Charleston

Spring 2010 *Language: Cognitive Psychology*
College of Charleston

Teaching Assistant

Fall 2006 Cognitive Psychology Laboratory (Lab Instructor)
Department of Psychology, University of Illinois

Spring 2006 Cognitive Psychology Lab: Neural Network Modeling (Lab Instructor)
Department of Psychology, University of Illinois

Fall 2005 Learning and Memory
Department of Psychology, University of Illinois

*Mentoring and Supervising**Dissertation Committee Member*

est. 2022 Christina Blomquist, Dept. of Hearing and Speech Sciences, UMD

2021 Allison Johnson, Dept. of Hearing and Speech Sciences, UMD
Nick Pandža, Program in Second Language Acquisition, UMD
Rebecca Bieber, Dept. of Hearing and Speech Sciences, UMD

2020 Brittany Jaekel, Dept. of Hearing and Speech Sciences, UMD

2019 Mattson Ogg, Neuroscience and Cognitive Science Program, UMD

Ad Hoc Dissertation Examiner

2020 Gal Nitsan, Dept. of Communication Sciences and Disorders, University of Haifa, IL

2017 Kelly Miles, Audiology Section, Dept. of Linguistics, Macquarie University, AUS

Qualifying Exam, First-Year or Capstone Project, or Thesis Committee Member

2021 Madison Buntrock, Dept. of Hearing and Speech Sciences, UMD
Qualifying Exam Committee

Jason Dunlap, Dept. of Hearing and Speech Sciences, UMD
Qualifying Exam Committee

2019 Anna Tinnemore, Neuroscience and Cognitive Science Program, UMD
Ph.D. First-year Project Committee

Nick Pandža, Program in Second Language Acquisition, UMD
Ph.D. Qualifying Examination Committee

2018 Julie Knorr, Department of Hearing and Speech Sciences, UMD
Honors Undergraduate Thesis Committee

2017 Niki Razeghi, Department of Hearing and Speech Sciences, UMD
Au.D. Capstone Project Mentor

Trainee or Student Mentorship

2020-Present Michael Johns, Ph.D.
Applied Research Lab for Intelligence and Security
Postdoctoral Research Associate (co-mentor)

2019-Present Kristina Milvae, Au.D., Ph.D., CCC-A
Department of Hearing and Speech Sciences, UMD

Postdoctoral Fellow (NIH/NIDCD K01, co-mentor)

Regina Calloway, Ph.D.

Applied Research Laboratory for Intelligence and Security & Institute for Systems Research, UMD

Postdoctoral Research Associate (co-mentor)

Kuhoo Bhal

College Park Scholars – Life Sciences, UMD

Research Practicum Undergraduate

2018-2020

Ian Phillips, Ph.D.

Applied Research Laboratory for Intelligence and Security

Postdoctoral Research Associate (co-mentor)

2013-2021

Undergraduate and graduate research assistants trained in my lab at UMD:

Elizabeth Agboola, Alyssa Frenette, Emily Joseph, Aidan Marshall-Cort, Erin Murphy, Kim Pham, Geetika Reichmann, Jane Rose, Lori Stanton

Outreach

Summer 2011 & 2012

Lecture and MRI demo: *An Introduction to Magnetic Resonance Imaging*

Ashley Hall High School Summer Neuroscience Institute

Provides an opportunity for exceptional female high school juniors and seniors to learn about clinical and research neuroscience.

Medical University of South Carolina

Spring 2012

Lecture and MRI demo: *An Introduction to Magnetic Resonance Imaging*

Ashley Hall High School, AP Biology

Medical University of South Carolina

Fall 2011

Kuchinsky et al. *Evaluation of pupil size as an indicator of listening effort.*

Poster presented at Neuropalooza: The MUSC/College of Charleston Student-

Postdoc Neuroscience Research Day

Provides an outreach opportunity for students and postdocs to present their research in a relaxed environment.

ADDITIONAL PROFESSIONAL EXPERIENCE

2021-Present

Associate Graduate Faculty, School of Languages, Literatures, and Cultures

University of Maryland

2018- Present

Affiliate Scientist, Applied Research Laboratory for Intelligence and Security

(formerly Center for Advanced Study of Language)

University of Maryland

2016-Present

Faculty member of the Center for Comparative and Evolutionary Biology of Hearing

University of Maryland

2015-Present

Affiliate faculty member of the Neuroscience and Cognitive Neuroscience Program

Affiliate faculty member of the Language Science Center

Adjunct faculty member of the Hearing and Speech Sciences Department

University of Maryland

2015-2018

Member of the committee on Faculty Affairs on the University Senate

Member of the Neuroscience and Cognitive Science Program Colloquium Committee

- 2003-2009 Graduate Research Assistant in the Language Production Lab
University of Illinois at Urbana-Champaign with Dr. Kathryn Bock
- 2000-2003 Undergraduate Research Assistant in the Memory and Cognition Lab
Brandeis University with Dr. Arthur Wingfield
- 2001 Summer Research Assistant in the Sensory and Consumer Testing Lab
George Washington University's Science & Engineering Apprentice Program
U.S. Army Soldier Systems Center (Natick) with Dr. Armand Cardello
- Ad Hoc Reviewer Scholarly Journals: *Am J Audiol*; *Atten Percept Psycho*; *BMJ Open*; *Cereb Cortex*; *Cognition*; *Cogn Affect Behav Ne*; *Ear Hearing*; *eNeuro*; *Exp Aging Res*; *Front Hum Neurosci*; *Front Neurosci*; *Front Sys Neurosci*; *Front Psych*; *Hearing Res*; *Int J Audiol*; *J Am Acad Audiol*; *J Acoust Soc Am*; *J Exp Psychol Learn*; *J Mem Lang*; *J Speech Lang Hear R*; *Lang Cognitive Proc*; *Med Sci Monitor*; *Nat Commun*; *Neuroimage*; *Neuropsychologia*; *PLoS ONE*; *Psychon B Rev*; *Psychophysiology*; *Trends Hear*
- Guest Article Editor: *SAGE Open*
- Scholarly Conferences: *Cognitive Science Society*; *Society of the Neurobiology of Language*
- Book Publishers: *Plural Publishing*
- Funding Agencies: *Action on Hearing Loss*; *Medical Research Council (MRC) Neurosciences & Mental Health Board*; *National Science Foundation (NSF) Linguistics Program*; *National Sciences and Engineering Research Council of Canada*; *Defense Health Agency (DHA) Small Business Innovation Research (SBIR) Program*