

Curriculum Vitae

Matthew B. Winn

I. Identifying

A. Academic Rank

1. Assistant Professor
2. Graduate Faculty Appointment in Speech-Language-Hearing Sciences

B. Degrees Awarded

<u>Degree</u>	<u>Institution</u>	<u>Date Degree Granted</u>
B.A.	University of Delaware	2005
Au.D	University of Maryland College Park	2010
Ph.D.	University of Maryland College Park	2011
	<i>Dissertation Title: The use of acoustic cues in phonetic perception: effects of spectral degradation, limited bandwidth and background noise</i>	

C. Certification Status: None

D. Employment

Assistant Professor	Department of Speech-Language-Hearing Sciences, University of Minnesota, Minneapolis, MN	Fall 2018 - present
Assistant Professor	Department of Speech & Hearing Sciences, University of Washington, Seattle, WA	Fall 2015 - Summer 2018

E. Current Membership in Professional Organizations

Acoustical Society of America, 2010-present

American Auditory Society, 2010-present

Association for Research in Otolaryngology, 2012-present

Research and Scholarship

F. Honors and Awards

Distinguished Teaching Award

Univ. of Maryland 2010, 2011

Dean's Scholar Mentorship Award

Univ. of Maryland 2011

Charles N. Ford Best Translational
Clinical Poster

Univ. of Wisconsin Dept. of Surgery,
2014

Second place, Poster Pitch Blitz

Association for Research in
Otolaryngology, 2014

Young Investigator Award

8th Int'l Symposium on Objective
Measures in Auditory Implants, Toronto,
2014

Young Investigator Travel Award

Association for Research in
Otolaryngology, 2015

Editorships/Reviewer

Editorial Consultant:

Ear and Hearing; Journal of the Acoustical Society of America; Journal of Speech, Language and Hearing Research; Trends in Hearing; American Journal of Audiology; Journal of the Association for Research in Otolaryngology; Public Library of Science (PLoS)-One; Annals of Otolaryngology, Rhinology and Laryngology; Frontiers in Psychology; Hearing Research; Journal of Communication Disorders; Journal of Phonetics; Mind Brain and Education

Conference Abstracts

Association for Research in Otolaryngology, 2015

Grant Reviewer:

Action on Hearing Loss

Royalty Research Fund (University of Washington)

Veni grant (Netherlands Organisation for Scientific research)

G. Research and Training Grants:

1. Internal

None

2. External

"Listening effort in cochlear implant users"
NIH/NIDCD R01 DC017114, \$1,837,970
August 2018-July 2023
Role: PI

"Measuring listening effort and spectral resolution in cochlear implant patients"
NIH/NIDCD R03 DC014309, \$454,796
January 2016-August 2019
Role: PI

"Race, ethnicity, and speech intelligibility in normal hearing and hearing impairment"
NIH/NIDCD R21 DC08070, \$194,659
July 2019-June 2021
Role: Consultant

H. Research Mentoring:

Maria Paula Rodriguez, student research volunteer, no credit registration
Emily Hugo, student research volunteer, no credit registration
Lindsay Williams, student research volunteer, no credit registration

Publications

1. Refereed Articles (*asterisks indicate student-coauthors)

Winn, M.B & Idsardi, W.J. (2008). Musical evidence regarding trochaic inversion. *Language and Literature*, 17 (4), 335-349.

Winn, M.B., Chatterjee, M., & Idsardi, W.J. (2012). The use of acoustic cues for phonetic identification: Effects of spectral degradation and electric hearing. *Journal of the Acoustical Society of America*, 131, 1465-1479. doi: 10.1121/1.3672705

Winn, M.B., Chatterjee, M., & Idsardi, W.J. (2013). The roles of voice onset time and F0 in stop consonant voicing perception: Effects of masking noise and low-pass filtering. *Journal of Speech, Language and Hearing Research*, 56, 1097-1107. doi: 10.1044/1092-4388(2012/12-0086)

Winn, M.B., Rhone, A.E., Chatterjee, M., & Idsardi, W.J. (2013). Auditory and visual context effects in phonetic perception by normal-hearing listeners and listeners with cochlear implants. *Frontiers in Psychology: Auditory Cognitive Neuroscience*, 4, article 824, 1-13. doi: 10.3389/fpsyg.2013.00824

- Chrabaszcz, A.V., **Winn**, M.B., Lin, C.Y., & Idsardi, W.J. (2014). Acoustic Cues to Perception of Word Stress by English, Mandarin and Russian Speakers. *Journal of Speech, Language, and Hearing Research*, 57, 1468-1479. doi:10.1044/2014_JSLHR-L-13-0279
- Winn**, M.B., Edwards, J.R., and Litovsky, R.Y. (2015). The impact of auditory spectral resolution on listening effort revealed by pupil dilation. *Ear and Hearing*. 36(4):e153-65. doi: 10.1097/AUD.000000000000145
- Winn**, M.B. & Litovsky, R.Y. (2015) Using speech sounds to test functional spectral resolution in listeners with cochlear implants. *Journal of the Acoustical Society of America*, 137, 1430-1442. doi: 10.1121/1.4908308
- Stilp, C.E., *Anderson, P.W., **Winn**, M.B. (2015) Predicting contrast effects following reliable spectral properties in speech perception. *Journal of the Acoustical Society of America*, 137, 3466-3476. doi: 10.1121/1.4921600
- *Ehlers, E., Kan, A., **Winn**, M.B., *Stoelb, C., Litovsky, R. (2016). Binaural hearing in children using Gaussian enveloped and transposed tones. *Journal of the Acoustical Society of America*, 139, 1724-1733. doi: 10.1121/1.4945588
- Winn**, M.B., Won, J.H., Moon, I.J. (2016). Assessment of spectral and temporal resolution in cochlear implant users using psychoacoustic discrimination and speech cue categorization. *Ear and Hearing*, 37(6):e377–e390. doi: 10.1097/AUD.0000000000000328
- Kong, Y.-Y., **Winn**, M.B., Poellmann, K., Donaldson, G. (2016) Discriminability and perceptual saliency of temporal and spectral cues for final fricative consonant voicing in simulated cochlear-implant and bimodal hearing. *Trends in Hearing*, 20, 1-15. doi: 10.1177/2331216516652145
- Reidy, P., *Kristensen, K., **Winn**, M.B., Litovsky, L., Edwards, J. (2016). The acoustics of word-initial fricatives and their effect on word-level intelligibility in children with bilateral cochlear implants. *Ear and Hearing*. doi: 10.1097/AUD.0000000000000349
- Winn**, M.B., (2016). Rapid release from listening effort resulting from semantic context, and effects of spectral degradation and cochlear implants. *Trends in Hearing*, 20, 1-17. doi: 10.1177/2331216516669723
- *DiNino, M., Wright, R.A., **Winn**, M.B., Bierer, J.A. (2016). Vowel and consonant confusion patterns resulting from spectral manipulations in vocoded stimuli designed to replicate poor electrode-neuron interfaces in cochlear implants. *Journal of the Acoustical Society of America*, 140(6), 4404–4418.

- *Kapnoula, E., **Winn, M.B.**, Kong, E.J., Edwards, J., McMurray, B. (2017). Evaluating the sources and functions of gradience in phoneme categorization: An individual differences approach. *Journal of Experimental Psychology: Human Perception and Performance*, 43, 1594-1611. doi: 10.1037/xhp0000410
- Winn, M.B.**, Wendt, D., Koelewijn, T., Kuchinsky, S. (2018). Best practices in using pupillometry to measure listening effort: an introduction for those who want to get started. *Trends in Hearing*, 22, 1-32. doi: 10.1177/2331216518800869
- Winn, M.B.**, Moore, A. (2018). Pupillometry reveals that context benefit in speech perception can be disrupted by later-occurring sounds, especially in listeners with cochlear implants. *Trends in Hearing*, 22, 1-22. doi: 10.1177/2331216518808962
- Winn, M.B.**, Kan, A., Litovsky, R.Y. (2019). Temporal dynamics and uncertainty in binaural hearing revealed by anticipatory eye movements. *Journal of the Acoustical Society of America*, in press.
- Winn, M.B.**, & Stilp, C. (2019). Phonetics and the Auditory System. In W. Katz & P. Assmann (Eds.), *Routledge Handbook of Phonetics*. In press.

Other papers submitted / in revision

- Ihlefeld, A., *Thakkar, T., **Winn, M.B.**, Dhar, S., Litovsky, R. Robust spatial release from masking for spectrally degraded vocoded speech (in revision)
- Gianakas*, S., **Winn, M.B.** Measuring uncertainty of phonetic perception in cochlear implant listeners using a lexical bias paradigm (under review)
- Winn, M.B.** Using a subtle test of phonetic perception to match cochlear implant simulations to cochlear implant performance (under review)
- Winn, M.B.** & O'Brien, G. Flaws in Spectral Ripple Stimuli for Listeners with Cochlear Implants (in revision)
- Geller, J., **Winn, M.B.**, Mahr, T., Mirman, D. GazeR: A package for processing gaze position and pupil size data (in revision)

Other papers in preparation

- Winn, M.B.** Manipulation of voice onset time for speech stimuli: a flexible Praat script and tutorial (in prep)
- *Smith, M.L. & **Winn, M.B.** Individual variability in the adjustment to simulated shallow cochlear implant insertion depths (in prep)
- Winn, M.B.** & Moore, A. Acoustic cues used for accommodating gender-related voice differences heard by listeners with cochlear implants and with normal hearing (in prep)
- Winn, M.B.** Acoustic phonetic cue weighting in people who use a single cochlear implant and normal hearing in the contralateral ear (in prep)

3. Presentations at Scientific and Professional Meetings

i. Refereed with Abstracts

- Winn, M.B.,** Blodgett, A., Bauman, J., Bowles, A., Charters, L., Rytting, C.A., & Shamo, J. (2008). Vietnamese monophthong vowel production by native speakers and American adult learners. “Acoustics ‘08” the joint meeting of the Acoustical Society of America, the European Acoustics Association, and the Société Française D’Acoustique, Paris, France.
- Lin, C., Lukyanenko, A., **Winn, M.B.,** Idsardi, W. (2012). Acoustic Cues to Perception of Word Stress by English, Mandarin and Russian Speakers. Boston University Conference on language Development, Boston, MA.
- Winn, M.B.,** Rhone, A.E., Idsardi, W.J. & Chatterjee, M. (2013). Auditory and visual adaptation in cochlear implant speech perception. Podium presentation at the annual meeting of the American Auditory Society, Scottsdale, AZ.
- Moon, I.J., Won, J.-H. & **Winn, M.B.** (2014). Assessment of spectral and temporal resolution in cochlear implant users: speech and psychoacoustic approach. MidWinter meeting of the Association for Research in Otolaryngology, San Diego, CA.
- Winn, M.B.** (2014). Single-sided deafness with a cochlear implant: a unique opportunity to learn about speech perception and the auditory system. Podium presentation at the CRASH Cochlear Implant Research Mini-Conference, Madison, WI.
- Winn, M.B.** and Litovsky, R.Y. (2014). Measuring listening effort in CI listeners using pupil dilation. Podium presentation at the 8th International Symposium on Objective Measures in Auditory Implants, Toronto, ON, Canada.
- Winn, M.B.** and Litovsky, R.Y. (2014). The impact of bilateral cochlear implantation on listening effort revealed through measurements of pupil dilation. Podium presentation at the 2014 American Cochlear Implant Alliance Conference, Nashville, TN.
- Winn, M.B.,** Buhr-Lawler, M., Kan, A., Jones, H., Litovsky, R., Gubbels, S. (2014). The impact of adding a contralateral cochlear implant to a normal hearing ear in terms of spatial hearing abilities and listening effort during speech perception. Podium presentation at the 2014 American Cochlear Implant Alliance Conference, Nashville, TN.
- Winn, M.B.,** Litovsky, R.Y. (2015). The roles of harmonicity and temporal pitch in the perception of speech in noise: a study of intelligibility and listening effort. Podium presentation at the 38th Annual midwinter meeting of the Association for Research in Otolaryngology, San Diego, CA.
- Kan, A., **Winn, M.B.,** Litovsky, R.Y. (2015) Investigating the ear advantage using pupillometry. MidWinter meeting of the Association for Research in Otolaryngology, San Diego, CA.

- Winn, M.B., Misurelli, S.M., Litovsky, R.Y. (2015).** The impact of spectral resolution on the efficiency of sentence processing. Poster presented at the 38th Annual midwinter meeting of the Association for Research in Otolaryngology, San Diego, CA.
- Venker, C., **Winn, M.B., Ellis-Weismer, S., Saffran, J., Edwards, J. (2015).** Mutual Exclusivity in Young Children with ASD: An Eye-Gaze Study. Presentation accepted to the International Meeting for Autism Research, Salt Lake City, UT.
- Winn, M.B., Edwards, J.R., Litovsky, R.Y. (2015).** The relationship between phonetic cue weighting and listening effort in listeners with cochlear implants. Invited podium presentation at the 169th meeting of the Acoustical Society of America, Pittsburgh, PA.
- Winn, M.B., (2016).** Objective measures of effort and speech perception in hearing aid users. Invited Podium presentation at the World Congress of Audiology, Vancouver, BC.
- Winn, M.B. (2016)** Sound quality impacts the speech and effort of sentence perception. Poster presented at the meeting of the American Auditory Society, Scottsdale, AZ.
- Winn, M.B. (2016).** Rapid reduction of listening effort resulting from predicting speech processing, and delays associated with cochlear implantation. Poster presented at the Acoustical Society of America, Salt Lake City, UT.
- Winn, M.B. (2016).** Sensitivity to binaural cues above threshold as revealed by eye movements. Podium presentation at the Acoustical Society of America, Salt Lake City, UT.
- Winn, M.B. (2016).** Using sociolinguistic phonetic perception to fine tune cochlear implant simulations. Poster presented at the Acoustical Society of America, Salt Lake City, UT.
- Winn, M.B. (2016).** Pupillary responses signify more than just effort: windows into processing, prediction, reflection, and uncertainty. Invited Podium presentation at the Acoustical Society of America Fall meeting, Honolulu, HI.
- DiNino, M., **Winn, M.B., Bierer, J.A. (2016).** Cochlear implant listener vowel identification performance and confusion patterns with selective channel activation programs. Podium presentation at the Acoustical Society of America Fall meeting, Honolulu, HI.
- Gianakas, S., **Winn, M.B. (2016).** Exploiting the Ganong effect to probe for phonetic uncertainty resulting from hearing loss. Poster presented at the Acoustical Society of America, Honolulu, HI.
- Moore, A., **Winn, M.B. (2016).** Acoustic cues underlying the adjustment to talker sex in perception of fricative sounds. Poster presented at the Acoustical Society of America, Honolulu, HI.
- O'Brien, G., **Winn, M.B. (2016).** Uncertainty in binaural hearing linked to inherent envelope fluctuations. Poster presented at the Acoustical Society of America, Honolulu, HI.
- Winn, M.B. (2017).** Signs of Post-stimulus Auditory Processing in Pupillary Responses. Podium presentation at the 39th Annual midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.

- O'Brien, G., **Winn**, M.B. (2017). Uncertainty in Binaural Hearing Linked to Inherent Envelope Fluctuations. Podium presentation at the 39th Annual midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.
- Winn**, M.B. (2017). Dynamic control over the allocation of listening effort in speech perception. Podium presentation at the Acoustical Society of America, Boston, MA.
- DiNino, M., **Winn**, M.B., Arenberg, J. (2017). Vowel recognition scores of children with cochlear implants are related to speech-based spectral resolution and time with the Implant. Podium presentation at the American Cochlear Implant Alliance, Washington, DC.
- Gianakas, S., **Winn**, M.B (2017). Severe deficits in perception of anticipatory coarticulation in cochlear implant listeners in cochlear implant listeners. Poster presented at the Conference on Implantable Auditory Prostheses, Lake Tahoe, CA.
- Gianakas, S., **Winn**, M.B (2017). Revealing phonetic uncertainty in cochlear implant listeners. Poster presented at the Conference on Implantable Auditory Prostheses, Lake Tahoe, CA.
- Moore, A., **Winn**, M.B. (2017). Adjustment to variable voice acoustics by cochlear implant listeners. Poster presented at the Conference on Implantable Auditory Prostheses, Lake Tahoe, CA.
- O'Brien, G., **Winn**, M.B. (2017). Aliasing of spectral ripples through CI processors: a challenge to the interpretation of correlation with speech recognition scores. Poster presented at the Conference on Implantable Auditory Prostheses, Lake Tahoe, CA.
- Winn**, M.B., Moore, A. (2017). Direct and indirect context effects in speech perception by CI listeners. Podium presentation at the CI Crash conference, Madison, WI.
- Gianakas, S., **Winn**, M.B. (2017). Severe deficits in perception of coarticulation in listeners with cochlear implants. Podium presentation at the CI Crash conference, Madison, WI.
- Winn**, M.B. (2017). Using the pupil response to measure how hearing loss and task demands affect the timing (not just the amount) of listening effort. Invited Podium presentation at Pupillometry in Hearing Science workshop, Amsterdam.
- Winn**, M.B. (2017). Using pupillometry to look inside the process of repairing mistakes in speech perception. Invited presentation at Boston University Pupillometry Symposium, Boston, MA.
- DiNino, M., **Winn**, M.B., Duchon, A., Arenberg, J. (2018). Phonetic cue-weighting in children and adults with cochlear implants. Poster presented at the Annual midwinter meeting of the Association for Research in Otolaryngology, San Diego, CA.
- Winn**, M.B. (2018). More readable code in R using pipes and layers. Invited presentation at ancillary meeting at the 40th Annual midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.
- Jahn, K., DiNino, M., **Winn**, M.B., Arenberg, J. (2018). Relating Vowel Confusions to Focused Thresholds in Pediatric Cochlear Implant Users. Poster presented at the

Annual midwinter meeting of the Association for Research in Otolaryngology, San Diego, CA.

Gianakas, S., **Winn**, M.B. (2018). Listening to degraded speech can cause listeners to “wait and see”. Presentation at the meeting of the Acoustical Society of America, Minneapolis, MN.

Winn, M.B. (2018). Dynamic allocation of listening effort when listening to speech. Presentation at the meeting of the Acoustical Society of America, Minneapolis, MN.

Winn, M.B., O’Brien, G. (2018). Time-series analysis of binaural perception and uncertainty using eye movements. Podium presentation at the meeting of the Acoustical Society of America, Victoria, BC.

Jahn, K., DiNino, M., **Winn**, M.B., Hulswit, J., Arenberg, J. (2018). Vowel Confusion Patterns in Children and Adults with Cochlear Implants. Podium presentation at the meeting of the Acoustical Society of America, Victoria, BC.

Smith, M., **Winn**, M.B. (2018). Perceiving phonemes with simulated variable cochlear implant insertion depths. Poster presentation at the meeting of the Acoustical Society of America, Victoria, BC.

McCloy, D., Panfili, L., John, C., **Winn**, M.B., Wright, R. (2018). Gender, the individual, and intelligibility. Poster presentation at the meeting of the Acoustical Society of America, Victoria, BC.

Burg, E., Thakkar, T., Godar, S., **Winn**, M.B., Litovsky, R. (2019). Listening effort in bilateral cochlear implant users with asymmetric across-ear performance in speech perception. Poster presented at the Annual midwinter meeting of the Association for Research in Otolaryngology, Baltimore, MD.

Winn, M.B., Moore, A. (2019). Context reduces CI listening effort, but benefit is fragile. Poster presented at the Annual meeting of the American Auditory Society, Scottsdale, AZ.

Winn, M.B., Moore, A. (2019). Mechanisms and speed of adjusting to voices of different talkers. Poster presented at the Annual meeting of the American Auditory Society, Scottsdale, AZ.

*Burg, E., *Thakkar, T., Godar, S., **Winn**, M.B., Litovsky, R. (2019). The Effect of Asymmetric Speech Perception on Listening Effort in Adults with Cochlear Implants. Poster presented at the Annual meeting of the American Academy of Audiology.

Winn, M.B., Moore, A. (2019). Backwards and indirect context effects in accommodating gender differences in speech. Invited podium presentation at the meeting of the Acoustical Society of America, Louisville, KY.

Winn, M.B., O’Brien, G. (2019). Flaws in the use of spectral ripples in cochlear implants. Podium presentation at the meeting of the Acoustical Society of America, Louisville, KY.

- *Dirks, C., **Winn, M.B.** (2019). Envelope compression as a qualifying factor in the “eight-channel” limit. Poster presented at the Conference on Implantable Auditory Prostheses, Lake Tahoe, CA.
- *Smith, M., **Winn, M.B.** (2019). Individual differences in recalibrating to upward spectral shifts. Poster presented at the Conference on Implantable Auditory Prostheses, Lake Tahoe, CA.
- *Burg, E., Thakkar, T., *Anderson, S., Godar, S., **Winn, M.B.**, Litovsky, R. (2019). Does degree of speech asymmetry modulate bilateral speech intelligibility and listening effort in adults with bilateral cochlear implants and adults with normal hearing? Poster presented at the Conference on Implantable Auditory Prostheses, Lake Tahoe, CA.
- Winn, M.B.** (2019). The effect of speaking rate on CI users’ listening effort and access to sentence context. Poster presented at the Conference on Implantable Auditory Prostheses, Lake Tahoe, CA.

1. Non-refereed (State, National, and International Conferences, and invited colloquia)

Winn, M.B. (2014). *Using pupil dilation to measure auditory abilities and listening effort*. Invited Colloquium at the Department of Speech, Language & Hearing Sciences, Purdue University.

Winn, M.B. (2014). *Using pupil dilation to measure auditory abilities and listening effort*. Invited Colloquium at the Department of Speech & Hearing Sciences, University of Washington.

Winn, M.B. (2015). *The effects of spectral resolution on listening effort and speech processing*. Invited Colloquium at Boys Town National Research Hospital.

Winn, M.B. (2015). *Learning more about speech perception through measures of pupil dilation*. Invited Colloquium at the Department of Speech-Language-Hearing Sciences, University of Minnesota.

Winn, M.B. (2015). *Learning more about speech perception through measures of pupil dilation*. Invited Colloquium at the Department of Communication Sciences and Disorders, University of South Florida.

Winn, M.B. (2017). *Temporal dynamics of speech perception and listening effort in people with hearing impairment*. Invited presentation at University College London, London, England.

Winn, M.B. (2017). *Temporal dynamics of speech perception and listening effort in people with hearing impairment*. Invited presentation at Boys Town National Research Hospital, Omaha, NE.

** Sanders, R., *Gianakas, S. **Winn, M.B.** (2018). Using linguistic knowledge to resolve ambiguity in speech perception when hearing is degraded. Presentation at Undergraduate Research Symposium, University of Washington.

Winn, M.B. (2018). Invitation to speak at XII International Meeting on Advances in Audiology, Salamanca, Spain. Declined.

Winn, M.B. (2018). *Speech: it's not as acoustic as you think*. Invited column in *Acoustics Today*, vol 14, Summer 2018.

Winn, M.B. (2018). *The impact of hearing impairment and cochlear implants on the timing of listening effort and speech understanding*. Invited presentation at Oticon Headquarters, Smørum, Denmark.

Winn, M.B. (2018) *The auditory system*. Auditory Neuroscience Training Workshop Univ. of Washington.

Winn, M.B. (2018). *Learning more about speech perception through measures of pupil dilation*. Invited Colloquium at the Department of Linguistics, University of Washington.

Winn, M.B. (2018). *The time course of listening effort in listeners with normal hearing and with cochlear implants*. University of Minnesota Cognitive Science Colloquium.

Winn, M.B. (2018). Time-series analysis of binaural perception and uncertainty using eye movements. University of Minnesota Acoustic Communication Seminar.

Winn, M.B. (2019) *Best practices for giving oral presentations*. Neuroscience Research Training Workshop, Univ. of Minnesota.

Winn, M.B. (2019) *Preparing for job talks*. Speech-Language-Hearing Sciences PhD student ProSeminar, Univ. of Minnesota.

** *Undergraduate student presentation*

II. Teaching and Advising

A. M.A. Students

(none)

Committee Membership

1. Plan A thesis

Heather Fischle (AuD capstone committee member)
Michael Smith (AuD capstone committee member)
Annie Duchen (AuD capstone committee member)
Janice Vong (AuD capstone committee member)

B. Ph.D. Students

Advisees

Steven Gianakas (dissertation committee chair)

Committee Membership

Lindsay DeVries (Preliminary examination committee member, dissertation committee member)
Mishaela DiNino (Preliminary examination committee member, dissertation committee member)
Nicole Chartier (Preliminary examination committee member, dissertation committee member)
Jesse Resnick (Preliminary examination committee member, dissertation committee member)
Chieh Kao (Preliminary examination committee member)

C. Undergraduate Projects

Senior Papers

Sanders, Rylie. *Using linguistic knowledge to resolve ambiguity in speech perception when hearing is degraded*. Senior Honors Thesis Paper, Spring, 2018 (chair).

Honors project papers

Dougherty, Katherine, *Compression of the amplitude envelope in vocoded speech*, Honors project paper, Fall, 2018
Kerr, Jackson, *A Study in the Evolution of Methodologies in Measuring Vowel Shifts*, Honors project paper, Fall, 2018
Rao, Bryce, *Acoustic Analysis of Debate Speech*, Honors project paper, Fall, 2018
Flynn, Lillia, *Measuring Vowel Formants in Different Dialects*, Honors project paper, Fall, 2018

D. Courses Taught

Regular:

<u>Course Number and Title</u>	<u>Institution and Term Offered</u>
HESP 403, Phonetics	Fall 2005, Spring 2006, Summer 2007, Fall 2007, Spring 2008, Summer 2008, Fall 2008, Spring 2009, Fall 2009, Spring 2010, Fall 2010, Spring 2011 University of Maryland College Park
CSD 863, Implantable Auditory Protheses	Fall 2012 University of Wisconsin-Madison
SPHSC 302, Phonetics	Winter 2016 University of Washington
SPHSC 461, Hearing Science	Spring 2016, Spring 2017, Spring 2018 University of Washington
SPHSC 509, Advanced Hearing Science	Fall 2016, Fall 2017 University of Washington
SLHS 1301W: The Physics and Biology of Spoken Language	Fall, 2018 University of Minnesota
SLHS 5804, Cochlear Implants	Spring, 2019 University of Minnesota

Guest Lecturer:

<u>Course Number and Title</u>	<u>Institution and Term Offered</u>
Speech & Hearing Sciences 561, Seminar on Hearing Sciences and Disorders (Measuring listening effort)	Fall 2015, Univ. of Washington

TEACHING IMPROVEMENT

Early Career Teaching and Learning Program (2018-2019 academic year)
External teaching consultation (Spring 2019)
with Paul Ching, Center for Education Innovation
External teaching evaluation (Spring 2019)
with Tiffany Wolf, College of Veterinary Medicine

III. SERVICE

A. College and University

1. Departmental

Member, search committee, assistant professor in speech-language pathology, 2018-2019, University of Minnesota

Member, merit committee, Speech-Language-Hearing Sciences, 2018-2019, University of Minnesota

2. College

(None)

3. University

(None)

B. Profession and Discipline:

Member, Technical Council, Acoustical Society of America, committee on psychological and physiological acoustics, 2016 – present

Member, Association for Research in Otolaryngology mentorship program (clinician-scientist group), 2018

Winn, M.B. (2016). *Pupillary responses show deployment of listening effort during and after the processing of speech*. Invited presentation at National Center for Rehabilitative Auditory Research; nationally telecast VA audiology research seminar.

Winn, M.B., Picou, E., Teubner-Rhodes, S., Eckert, M. (2017). Measuring and understanding listening effort. Invited presentation for American Academy of Audiology nationally telecast e-seminar.

C. Community:

Hearing impairment and listening effort: How do we measure it and why does it matter? Podium presentation at the local chapter of the Hearing Loss Association of America, Seattle, WA and Bellevue, WA, 2016

Consultation with Mock Trial Team, Seattle Preparatory School, 2018

The Time Course of Speech Processing in Listeners with Normal Hearing and with Cochlear Implants. Invited keynote lecture at the Annual Symposium of the Center for Applied and Translational Sensory Science. February 1, 2019

“There is only one Beethoven” Consultant, Minnesota Public Radio segment. I provided input for the content of this on this 36-minute program regarding the nature of hearing impairment and how it affects peoples’ lives, provided audio content and

simulations of tinnitus and hearing loss. Available online at
<https://www.decomposedshow.org/episode/2019/05/14/there-is-only-one-beethoven>