

CURRICULUM VITAE

Kristina DeRoy Milvae

Cary Hall 137U ◊ University at Buffalo ◊ Buffalo, NY 14214

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EDUCATION

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|------|-------|--|
| 2017 | Ph.D. | Speech, Language, and Hearing Sciences, Purdue University, West Lafayette, IN
Dissertation: Exploration of the relationship between cochlear gain reduction and speech-in-noise performance |
| 2013 | Au.D. | Purdue University, West Lafayette, IN |
| 2009 | B.S. | Communication Disorders, University of Massachusetts, Amherst, MA
<i>summa cum laude</i>
Honors Thesis: Adaptive-bandwidth measures of speech-frequency importance functions |

PROFESSIONAL EXPERIENCE

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| 2022-present | Assistant Professor, Department of Communicative Disorders and Sciences, Department of Psychology Affiliate, University at Buffalo, Buffalo, NY |
| 2017-2022 | Postdoctoral Associate, Department of Hearing and Speech Sciences, University of Maryland, College Park, MD |
| 2012-2013 | Audiology Extern, IU Health Riley Hospital for Children, Indianapolis, IN |

PROFESSIONAL CERTIFICATION

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| 2016-present | CCC-A | Certificate of Clinical Competence in Audiology, American Speech-Language-Hearing Association (ASHA) |
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RESEARCH SUPPORT

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| 09/30/2022-09/30/2025 | “Enhanced objective measures for evaluating longitudinal changes in within-subject listening difficulty,” DoD (CDMRP, Hearing Restoration Research Program), Subaward Principal Investigator (Principal Investigator Douglas Brungart). |
| 07/01/2019-05/31/2022 | “Listening effort and binaural-hearing benefits in bilateral cochlear-implant users,” NIH (NIDCD, K01-DC018064), \$353,862. Principal Investigator. |
| 07/05/2017-06/30/2019 | “Comparative and evolutionary biology of hearing training grant,” NIH (NIDCD, T32-DC000046). Postdoctoral Trainee. |
| 07/01/2016-05/31/2017 | “Purdue Research Foundation research grant,” PRF. Predoctoral Trainee. |
| 07/01/2014-07/01/2016 | “Communicative disorders,” NIH (NIDCD, T32-DC000030). Predoctoral Trainee. |

PUBLICATIONS

*mentored student

A. Peer Reviewed Journal Articles

1. DeRoy Milvae, K. and Strickland, E. A. (2021). “Behavioral measures of cochlear gain reduction depend on precursor frequency, bandwidth, and level,” *Front. Neurosci.*, *15*, 1-14. <https://doi.org/10.3389/fnins.2021.716689>
2. DeRoy Milvae, K., Kuchinsky, S. E., Stakhovskaya, O. A., and Goupell, M. J. (2021). “Dichotic listening performance and effort as a function of spectral resolution and interaural symmetry,” *J. Acoust. Soc. Am.*, *150*, 920-935. <https://doi.org/10.1121/10.0005653>
3. DeRoy Milvae, K., Alexander, J. M., and Strickland, E. A. (2021). “The relationship between ipsilateral cochlear gain reduction and speech-in-noise recognition at positive and negative signal-to-noise ratios,” *J. Acoust. Soc. Am.*, *149*, 3449-3461. <https://doi.org/10.1121/10.0003964>
4. *Bakal, T. A., DeRoy Milvae, K., Chen, C., and Goupell, M. J. (2021). “Head shadow, summation, and squelch in bilateral cochlear implant users with linked automatic gain controls,” *Trends Hear.*, *25*, 1-17. <https://doi.org/10.1177/23312165211018147>
5. Goupell, M. J., Eisenberg, D., and DeRoy Milvae, K. (2021). “Dichotic listening performance with cochlear-implant simulations of ear asymmetry is consistent with difficulty ignoring clearer speech,” *Atten. Percept. Psychophys.*, *83*, 2083-2101. <https://doi.org/10.3758/s13414-021-02244-x>
6. DeRoy Milvae, K. and Strickland, E. A. (2018). “Psychoacoustic measurements of ipsilateral cochlear gain reduction as a function of signal frequency,” *J. Acoust. Soc. Am.*, *143*, 3114-3125. <https://doi.org/10.1121/1.5038254>
7. Whitmal, N. A. and DeRoy, K. (2012). “Use of an adaptive-bandwidth protocol to measure importance functions for simulated cochlear implant frequency channels,” *J. Acoust. Soc. Am.*, *131*, 1359-1370. <https://doi.org/10.1121/1.3672684>
8. Whitmal, N. A. and DeRoy, K. (2011). “Adaptive bandwidth measurements of importance functions for speech intelligibility prediction,” *J. Acoust. Soc. Am.*, *130*, 4032-4043. <https://doi.org/10.1121/1.3641453>

B. Conference Proceedings

1. DeRoy Milvae, K., Alexander, J. M., and Strickland, E. A. (2015). “Is cochlear gain reduction related to speech-in-babble performance?” *Proc. ISAAR*, *5*, 43-50. <https://proceedings.isaar.eu/index.php/isaarproc/article/view/2015-05>

C. Book Chapters

1. Kuchinsky, S. E. and DeRoy Milvae, K. (in press). “Pupillometry studies of listening effort: Implications for clinical audiology,” *Modern Pupillometry: Cognition, Neuroscience, and Practical Applications*.

PRESENTATIONS

*mentored student

A. Refereed Presentations

1. DeRoy Milvae, K., *Abramowitz, J. C., Kuchinsky, S. E., and Goupell, M. J. (2022). “Aging effects on listening effort in cochlear-implant users,” Acoustical Society of America (ASA) Meeting, Denver, CO. Session selected by the press office of the American Institute of Physics to be promoted with a press release and press conference.
2. DeRoy Milvae, K., *Bakal, T. A., Gaskins, C. R., Chen, C., Stein, A., and Goupell, M. J. (2021). “Sound localization and spatial release from masking in bilateral cochlear implant listeners with linked automatic gain controls,” Conference on Implantable Auditory Prostheses (CIAP), Virtual

Meeting.

3. DeRoy Milvae, K., Kuchinsky, S. E., Stakhovskaya, O. A., and Goupell, M. J. (2019). “Dichotic listening performance and effort in bilateral cochlear-implant and normal-hearing listeners,” Conference on Implantable Auditory Prostheses (CIAP), Lake Tahoe, CA.
4. DeRoy Milvae, K., Kuchinsky, S. E., Stakhovskaya, O. A., and Goupell, M. J. (2019). “The effect of spectral resolution on dichotic listening performance and effort,” Association for Research in Otolaryngology (ARO) Midwinter Meeting, Baltimore, MD.
5. DeRoy Milvae, K., Kuchinsky, S. E., Stakhovskaya, O. A., and Goupell, M. J. (2018). “Dichotic listening performance and listening effort for asymmetrical inputs,” Acoustical Society of America (ASA) Meeting, Minneapolis, MN.
6. Goupell, M. J., Stakhovskaya, O. A., Fong, S., and DeRoy Milvae, K. (2018). “Effect of envelope modulations in bilateral cochlear-implant listeners,” Association for Research in Otolaryngology (ARO) Midwinter Meeting, San Diego, CA.
7. DeRoy Milvae, K., Alexander, J. M., and Strickland, E. A. (2015). “Is cochlear gain reduction related to speech-in-babble performance?” International Symposium on Auditory and Audiological Research (ISAAR), Nyborg, Denmark.
8. Whitmal, N. A. and DeRoy, K. (2011). “Adaptive-bandwidth measurements of importance functions for speech intelligibility prediction,” American Auditory Society (AAS) Annual Scientific and Technology Conference, Scottsdale, AZ.
9. DeRoy, K. and Whitmal, N. A. (2008). “Adaptive-bandwidth measurements of speech frequency-importance functions,” American Speech-Language-Hearing Association (ASHA) Convention, Chicago, IL.

B. Refereed Posters

1. Tinnemore, A. R., *Abramowitz, J. C., *Field, N., Goupell, M. J., and DeRoy Milvae, K. (2023). “Listening-effort costs of high performance with cochlear implants,” Association for Research in Otolaryngology (ARO) Midwinter Meeting, Orlando, FL.
2. *Zukerman Schopf, D., DeRoy Milvae, K., Mayo, P., Cleary, M., and Goupell, M. J. (2021). “Correcting for interaural place-of-stimulation mismatch in bilateral cochlear-implant users: Simulations on how to maximize binaural outcomes,” Conference on Implantable Auditory Prostheses (CIAP), Virtual Meeting.
3. Cleary, M., DeRoy Milvae, K., Bernstein, J. G. W., and Goupell, M. J. (2021). “Effect of experimentally introduced interaural place-of-stimulation mismatch on speech understanding in bilateral cochlear-implant listeners,” Conference on Implantable Auditory Prostheses (CIAP), Virtual Meeting.
4. DeRoy Milvae, K., Alexander, J. M., and Strickland, E. A. (2016). “Investigation of the relationship between cochlear gain reduction and speech-in-noise performance at positive and negative signal-to-noise ratios,” Acoustical Society of America (ASA) Meeting, Salt Lake City, UT.
5. DeRoy Milvae, K. and Strickland, E. A. (2016). “Psychoacoustic estimates of cochlear gain reduction at 2 and 4 kHz,” Association for Research in Otolaryngology (ARO) Midwinter Meeting, San Diego, CA.
6. DeRoy Milvae, K. and Strickland, E. A. (2015). “Psychoacoustic measures of cochlear gain reduction at speech-relevant frequencies,” American Auditory Society (AAS) Annual Scientific and Technology Conference, Scottsdale, AZ.
7. DeRoy, K. and Strickland, E. A. (2012). “The effect of masker frequency and level on cochlear gain reduction and related learning effects,” Association for Research in Otolaryngology (ARO) Midwinter Meeting, San Diego, CA.
8. DeRoy, K. and Strickland, E. A. (2011). “The effect of a precursor on growth of masking functions and recovery from forward masking,” Association for Research in Otolaryngology (ARO) Midwinter Meeting, Baltimore, MD.

C. Non-Refereed Presentations

1. Cleary, M., DeRoy Milvae, K., Goupell, M. J. (2020). “Effects of experimentally introduced interaural mismatch on speech understanding in bilateral CI users,” Combined CI CRASH and Mid-Atlantic Seminar on Hearing (MASH), virtual meeting.
2. DeRoy Milvae, K. (2019). “The role of ear asymmetry in cochlear-implant listening performance and effort,” Seminars in Hearing Research at Purdue (SHRP), West Lafayette, IN.
3. DeRoy Milvae, K., Kuchinsky, S. E., Stakhovskaya, O. A., and Goupell, M. J. (2019). “Dichotic digits: Does interaural spectral resolution matter?” Mid-Atlantic Seminar on Hearing (MASH), College Park, MD.
4. DeRoy Milvae, K., Stakhovskaya, O. A., *Bakal, T., and Goupell, M. J. (2017). “Does interaural-correlation-based binaural interference follow ITD- or ILD-like frequency dependence?” Binaural Bash, Boston, MA.

TEACHING EXPERIENCE

A. Instructor of Record

1. Aural Rehabilitation [CDS 484/529], Fall 2022, 54 students, Department of Communicative Sciences and Disorders, University at Buffalo, Buffalo, NY
1. Instrumentation in Hearing and Speech Sciences [HESP 600], Fall 2018, 8 students, Department of Hearing and Speech Sciences, University of Maryland, College Park, MD
2. Implantable Devices [SLHS 553], Fall 2015, 3 students, Department of Speech, Language, and Hearing Sciences, Purdue University, West Lafayette, IN
3. Introduction to Assessment Audiology [SLHS 460], Spring 2015, 43 students, Department of Speech, Language, and Hearing Sciences, Purdue University, West Lafayette, IN

B. Guest Lecturer

1. Psychoacoustics [HESP 722], Fall 2021, Department of Hearing and Speech Sciences, University of Maryland, College Park, MD, Topic: Listening Effort
2. Psychoacoustics [HESP 722], Fall 2019, Department of Hearing and Speech Sciences, University of Maryland, College Park, MD, Topic: Pitch Perception
3. Auditory Diagnostics II [ACSD 721], Spring 2019, Department of Audiology, Speech-Language Pathology, and Deaf Studies, Towson University, Towson, MD, Topics: Contralateral Suppression of Otoacoustic Emissions and the Medial Olivocochlear Efferent System
4. Bases of Hearing Science [HESP 407], Spring 2018, Department of Hearing and Speech Sciences, University of Maryland, College Park, MD, Topics: Sound Propagation and Complex Sounds
5. Anatomy and Physiology of the Speech and Hearing Mechanisms [SLHS 304], Fall 2013, Department of Speech, Language, and Hearing Sciences, Purdue University, West Lafayette, IN, Topics: Inner Ear Physiology, Central Auditory System Anatomy and Physiology

C. Undergraduate Teaching Assistant

1. Fall 2007-Spring 2009, Department of Communication Disorders, University of Massachusetts, Amherst, MA
2. Fall 2007-Spring 2009, Department of Mathematics and Statistics, University of Massachusetts, Amherst, MA

MENTORSHIP

Graduate Student Research

- 2020-2022 Au.D. Capstone Project, “The interacting effects of spectral resolution and aging on listening effort,” Jordan Abramowitz. Student co-mentored with Matthew Goupell. University of Maryland, College Park, MD.

2018-2020 Au.D. Capstone Project, “Effects of synchronized automatic gain controls for spatial release from masking in bilateral cochlear-implant users,” Taylor Bakal. Student co-mentored with Matthew Goupell. University of Maryland, College Park, MD.

Undergraduate Student Research

2019-2021 Undergraduate Honors Thesis Committee Member, “Correcting for interaural place-of-stimulation mismatch in bilateral cochlear-implant users: Simulations on how to maximize binaural outcomes,” Danielle Zukerman. Student co-mentored with Matthew Goupell. University of Maryland, College Park, MD.

2019 Maryland Summer Scholar Project, “Simulating speech perception in bilateral cochlear implant users with asymmetric input,” Danielle Zukerman. Student co-mentored with Matthew Goupell. University of Maryland, College Park, MD.

SERVICE AND OUTREACH

Department Committee

2022-present CDS Coalition for Antiracism and Equity (CARE) Committee, University at Buffalo, Buffalo, NY
2021-2022 HESP Diversity Committee, University of Maryland, College Park, MD
2018-2020 HESP Commencement Committee, University of Maryland, College Park, MD

Peer Review

2022-present Ad hoc reviewer for *Journal of the Acoustical Society of America Express Letters (JASA-EL)*
2022-present Ad hoc reviewer for *Frontiers in Neuroscience*
2020-present Ad hoc reviewer for *Journal of Speech, Language, and Hearing Research (JSLHR)*
2020-present Ad hoc reviewer for *European Journal of Neuroscience (EJN)*
2019-present Ad hoc reviewer for *Ear and Hearing*

Leadership Roles in Meetings and Conferences

2023 spARO Special Initiative Workshop: Networking as a Tool for Resilience Discussion Leader, Association for Research in Otolaryngology (ARO) Midwinter Meeting, Orlando, FL
2022 Clinical Populations and Devices I Poster Session Co-Chair, Acoustical Society of America (ASA) Meeting, Denver, CO
2019 Normal and Impaired Binaural Hearing Session Co-Moderator, Association for Research in Otolaryngology (ARO) Midwinter Meeting, Baltimore, MD

AWARDS, HONORS, AND RECOGNITION

2020 Lessons for Success Conference, American Speech-Language-Hearing Association (ASHA)
2016 Dr. Robert L. Ringel Research Fund Scholarship, Purdue University
2015 ISAAR Student Scholarship, Danavox Jubilee Foundation
2009-2010 Ross Fellowship, Purdue University