

Gabrielle R. Merchant, Au.D., Ph.D., CCC-A

Boys Town National Research Hospital
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EDUCATION

Degree	Awarding Institution	Date
Au.D.	University of Massachusetts Amherst	5/2018
Ph.D.	Harvard-MIT Division of Health Sciences and Technology	6/2014
B.A.	Smith College	5/2009

PROFESSIONAL EXPERIENCE

Date	Position
5/18-Present	Director, Translational Auditory Physiology and Perception Laboratory <i>Boys Town National Research Hospital, Omaha, NE</i>
6/17-5/18	Clinical Doctoral Extern in Audiology <i>Boys Town National Research Hospital, Omaha, NE</i>
1/16-5/17	Instructor University of Massachusetts Amherst Department of Communication Disorders
9/14-5/18	Graduate Research and Teaching Assistant University of Massachusetts Amherst Department of Communication Disorders <i>Mentors: Drs. Karen Helfer and Richard Freyman</i>
1/10-9/14	Graduate Doctoral Research Assistant Massachusetts Eye and Ear Infirmary Eaton Peabody Laboratory <i>Mentors: Drs. John Rosowski, Heidi Nakajima, and Saumil Merchant</i>
6/09-1/10	Graduate Doctoral Research Assistant Massachusetts General Hospital Center for Laryngeal Surgery & Voice Rehabilitation <i>Mentors: Drs. Robert Hillman and James Heaton</i>
1/08-6/09	Undergraduate Research Assistant Smith College Department of Engineering <i>Mentor: Dr. Susan Voss</i>
8/07-1/08	Undergraduate Research Assistant Smith College Department of Education and Child Study <i>Mentors: Drs. Janice Gatty and Alan Marvelli, 8/07-1/08</i>
9/05-6/08	Undergraduate Research Assistant Smith College Department of Psychology <i>Mentors: Drs. Jill and Peter de Villiers</i>

CERTIFICATIONS AND LICENSURE

Date	
2018	Certificate of Clinical Competence American Speech Language Hearing Association
2018	State of Nebraska Audiology License

PROFESSIONAL MEMBERSHIPS

Date	Membership
2018-	American Academy of Audiology (Fellow)
2012-	American Auditory Society
2010-	Association for Research in Otolaryngology

FELLOWSHIPS, AWARDS, & HONORS

Date	Fellowship, Awards, & Honors
2018	NIH/NIDCD Clinical Research Loan Repayment Program Award (2 years of support)
2017	Mentored Student Travel Award, American Auditory Society, Scottsdale, AZ
2016	Research Mentoring-Pair Travel Award, American Speech-Language-Hearing Assoc.
2014	Travel Award Recipient, Mechanics of Hearing Meeting, Attica, Greece
2013	Helen Carr Peake Award Research Assistantship, Massachusetts Institute of Technology
2012	Best Poster Award, Middle-Ear Mechanics in Research and Otology, Daegu, South Korea
2012	Travel Award Recipient, Association for Research in Otolaryngology
2009	NIH Training Grant for Study in Harvard-MIT SHBT Program (3 years of support)
2009	Sigma Xi (research society)
2006	Smith College SURF Scholar
2005	Smith College STRIDE (Student Research in Departments) Scholar Award

TEACHING EXPERIENCE

Date	Course	Course Size
Spring 16,17	UMass Comm-Dis 313 Introduction to Audiology Primary Instructor of Record	98
Fall 15, 16	UMass Comm-Dis 416 Clinical Procedures Guest Lecture on Hearing and Balance Assessment	98
Spring 15	UMass Comm-Dis 645 Theories of Hearing Guest Lecture on Middle-Ear Mechanics and Power Reflectance	11
Fall 14-16	UMass Comm-Dis 311 Introduction to Hearing Science Graduate Teaching Assistant	102
Fall 12	MIT 6.551 Acoustics of Speech and Hearing Teaching Assistant	9

RESEARCH MENTORING EXPERIENCE

Date	Student
2018	Steven Carter Vanderbilt University Candidate for Doctoral Degree in Audiology Doctoral Capstone Committee Member: Characteristics of Wideband Acoustic Immittance in Children with Enlarged Vestibular Aqueduct

PROFESSIONAL DEVELOPMENT

Date	Activity
2018	ASHA Lessons for Success Grant Writing Development Course

UNIVERSITY & PROFESSIONAL SERVICE

Date	Service
2018	COBRE Grant Executive Advisory Committee Annual Meeting Planning Committee, Boys Town National Research Hospital Committee Chair
2017-	Trends in Hearing Ad-Hoc Reviewer
2017-	American Journal of Audiology Ad-Hoc Reviewer
2017-	Journal of the American Academy of Audiology Ad-Hoc Reviewer
2017-	Journal of Speech, Language, and Hearing Research Ad-Hoc Reviewer
2016-	Hearing Research Ad-Hoc Reviewer
2016-	Ear and Hearing Ad-Hoc Reviewer
2009 - 2014	Admissions Committee, Harvard-MIT SHBT Program Student Member
2006 - 2009	Sherrerd Teaching Prize Awards Committee, Smith College Student Member

INVITED TALKS

Merchant, G.R. *“Functional Measurements of Ear Pathology in Patients and Cadaveric Preparations”*, Boys Town National Research Hospital, Omaha, NE, September 2016

Merchant, G.R. *“Non-Invasive Assessment of Middle-Ear Mechanics Using Wideband Acoustic Immittance”*, University of Massachusetts Amherst, 8th Annual Leadership Conference, Amherst, MA, March 2015

Merchant, G.R. “*Functional Measurements of Ear Pathology in Patients and Cadaveric Temporal Bones*”, Massachusetts Eye and Ear Infirmary, Seminar at Eaton Peabody Laboratory, Boston, MA, January 2015

Merchant, G.R., Rosowski, J.J., Nakajima, H.H. “*Non-invasive methods for diagnosing diseases of the ear: Wideband acoustic immittance and umbo velocity.*” Annual Meeting of the Acoustical Society of America, Providence, RI, May 2014

REFEREED JOURNAL PUBLICATIONS

Merchant, G.R., Siegel, J.H., Neely, S.T., Rosowski, J.J., Nakajima, H.H. (2018). Effect of Middle-Ear Pathology on High-Frequency Ear-Canal Reflectance Measurements in the Frequency and Time Domains. *Journal of the Association for Research in Otolaryngology*, submitted.

Helfer, K.S., Freyman, R. L., **Merchant, G.R.** (2018). *How Repetition Influences Speech Understanding by Younger, Middle-Aged, and Older Adults*. *International Journal of Audiology*, in press.

Helfer, K.S., **Merchant, G.R.**, Wasiuk, P.A. (2017). *The Effect of Hearing Loss, Cognition, and Age on Speech Understanding in Speech and Noise Maskers*. *JSLHR*, 60(10), 3009-3018.

Helfer, K.S., **Merchant, G.R.**, Freyman, R. L. (2016). *Aging and the effect of target-masker alignment*. *The Journal of the Acoustical Society of America*, 140(5), 3844-3853.

Merchant, G.R., Merchant, S.N., Rosowski, J.J., Nakajima, H.H. (2016). *Controlled Exploration of the Effects of Conductive Hearing Loss on Power Reflectance in Human Cadaveric Preparations*. *Hearing Research*, 341, 19-30.

Farahmand, R.B., **Merchant, G.R.**, Lookabaugh, S.A., Roosli, C., Ulku, C.H., Smullen, J.L., McKenna, M.J., de Venecia, R.K., Halpin, C.F., Rosowski, J.J., Nakajima, H.H. (2015). *The Audiometric and Mechanical Effects of Partial Ossicular Discontinuity*. *Ear Hear*, 37(2), 206-215.

Merchant, G.R., Roosli, C., Niesten, M.F., Hamade, M.A., Lee, D.J., McKinnon, M.L., Ulku, C.H., Rosowski, J.J., Merchant, S.N., Nakajima, H.H. (2015). *Power Reflectance as a Screening Tool for the Diagnosis of Superior Semicircular Canal Dehiscence*. *Otol Neurotol*, 36, 172-177.

Nakajima, H.H., Pisano, D.V., Roosli, C., Hamade, M.A., **Merchant, G.R.**, Mafoud, L., Halpin, C.F., Rosowski, J.J., Merchant, S.N. (2012). *Comparison of Energy Reflectance and Umbo Velocity in Patients with Conductive Hearing Loss: A Preliminary Study*. *Ear Hear*, 33(1), 35-43.

Rosowski, J.J., Nakajima, H.H., Hamade, M.A., Mafoud, L., **Merchant, G.R.**, Halpin, C.F., Merchant, S.N. (2012). *Energy Reflectance, Umbo Velocity and Tympanometry in Normal Hearing Adults*. *Ear Hear*, 33(1), 19-34.

Voss, S.E., **Merchant, G.R.**, & Horton, N.J. (2011). *Effects of Middle-Ear Disorders on Ear-Canal Power Reflectance and Transmittance*, *Ear Hear*, 33(2), 195-208.

Stepp, C.E., **Merchant, G.R.**, Heaton, J.T., Hillman, R.E. (2011). *Effects of Voice Therapy on Relative Fundamental Frequency during Voicing Offset and Onset in Patients with Vocal Hyperfunction*, *Journal of Speech, Language, and Hearing Research*, 54, 1260-1266.

Merchant, G.R., Horton, N.J. & Voss, S.E. (2010) *Normative Reflectance and Transmittance on Healthy Newborn and 1-Month-Old Infants*, *Ear Hear*, 31(6), 746-754.

REFEREED CONFERENCE PAPERS

Merchant, G. R., Siegel, J. H., Neely, S. T., Rosowski, J. J., & Nakajima, H. H. (2015). *Effect of middle-ear pathology on high-frequency ear-canal reflectance measurements in the*

frequency and time domains. In Mechanics of Hearing: Protein to Perception: Proceedings of the 12th International Workshop on the Mechanics of Hearing, 1703, 1, 060003. AIP Publishing.

Merchant, G.R., Nakajima, H.H., Pisano, D.V., Roosli, C., Hamade, M.A., Mafoud, L., Halpin, C.F., Rosowski, J.J., Merchant, S.N. (2011). *Comparison of Ear-Canal Reflectance and Umbo Velocity in Patients with Conductive Hearing Loss. In What Fire Is In Mine Ears: Progress in Auditory Biomechanics: Proceedings of the 11th International Mechanics of Hearing Workshop, 1403, 1, 554. AIP Publishing.*

CONFERENCE ABSTRACTS

Merchant, G.R., Wasiuk, P.A., Freyman, R.L., Helfer, K.S. The Benefit of Repetition for Speech Understanding in Adults. American Academy of Audiology Annual Meeting, Nashville, TN, 2018 [poster presentation]

Helfer, K.S., Poissant, S.F., **Merchant, G.R.** Aging and the use of syntactic and talker consistency cues in a temporally interleaved task. Acoustical Society of America, Boston, MA, 2017 [poster presentation]

Merchant, G.R., Wasiuk, P.A., Freyman, R.L., Helfer, K.S. *Aging and Additivity of Masking at the Cocktail Party.* American Auditory Society Annual Meeting, Scottsdale, AZ, 2017 [poster presentation]

Merchant, G.R., Freyman, R.L., Helfer, K.S. *Additivity of Masking at the Cocktail Party.* Acoustical Society of America, Salt Lake City, UT, 2016 [poster presentation]

Helfer, K.S., **Merchant, G.R.** *Aging and the effect of target-masker synchrony and spatial distribution of maskers.* 6th Aging and Speech Communication Research Conference, Bloomington, IN, 2015 [podium presentation]

Helfer, K.S., Freyman, R.L., Costanzi, A., Laakso, S., **Merchant, G.** Can you say that again? Aging and repetition effects in different types of maskers. Acoustical Society of America, Pittsburg, PA, 2015 [poster presentation]

Owoc, M.S., **Merchant, G.R.**, Lee, D.J., Rosowski, J.J., Nakajima, H.H. *Superior Canal Dehiscence Repair: Power Reflectance, Umbo Velocity, cVEMP, Hearing.* American Auditory Society Annual Meeting, Scottsdale, AZ, 2015 [poster presentation].

Merchant, G.R., Siegel, J.H., Neely, S.T., Rosowski, J.J., Nakajima, H.H. (2015). *Frequency and Time Domain High-Frequency Ear-Canal Power Reflectance: Middle-Ear Pathology.* American Auditory Society Annual Meeting, Scottsdale, AZ, 2015 [poster presentation]

Merchant, G.R., Siegel, J.H., Neely, S.T., Rosowski, J.J., Nakajima, H.H. (2014). *Effect of Middle-Ear Pathology on High-Frequency Ear-Canal Reflectance Measurements in the Frequency and Time Domains.* Mechanics of Hearing, Attica, Greece, 2014 [podium presentation]

Merchant, G.R., Roosli, C., Niesten, M.F., Hamade, M.A., Lee, D.J., McKinnon, M.L., Ulku, C.H., Rosowski, J.J., Merchant, S.N., Nakajima, H.H. *Power Reflectance as a Screening Tool for the Diagnosis of Superior Semicircular Canal Dehiscence.* Eastern Auditory Retreat, Boston, MA, 2013 [podium presentation]

Merchant, G.R., Roosli, C., Niesten, M.E.F., Curtin, H.D.M Lee, D.J., Ulku, C.H., Merchant, S.N., Rosowski, J.J., Nakajima, H.H. *Ear-Canal Reflectance as a Screening Tool for the Diagnosis of Superior Semicircular Canal Dehiscence.* Midwinter Meeting of the Association for Research in Otolaryngology, Baltimore, MD, 2013 [poster presentation]

Merchant, G.R., Nakajima, H.H., Merchant, S.N., Rosowski, J.J. *Effect of Superior Semicircular Canal Dehiscence on Ear-Canal Reflectance and Umbo Velocity.* 6TH

- International Symposium on Middle-Ear Mechanics in Research and Otolaryngology, *Daegu, South Korea, 2012* [poster presentation]
- Merchant, G.R.**, Nakajima, H.H., Merchant, S.N., Rosowski, J.J. *Effect of Superior Semicircular Canal Dehiscence on Ear-Canal Reflectance and Umbo Velocity in a Temporal Bone Preparation*. Midwinter Meeting of the Association for Research in Otolaryngology, *San Diego, CA, 2012* [poster presentation]
- Merchant, G.R.**, Pisano, D.V., Hamade, M.A., Mafoud, L., Halpin, C.F., Nakajima, H.H., Merchant, S.N., Rosowski, J.J. *Exploring the Clinical Utility of Non-Invasive Measures of Middle-Ear Status*. Eastern Auditory Retreat, *New Haven, CT, 2011* [podium presentation]
- Merchant, G.R.**, Hamade, M.A., Mafoud, L., Halpin, C., Nakajima, H.H., Merchant, S.N., Rosowski, J.J. *Effect of Middle-Ear Pathology on Non-Invasive Measures of Middle-Ear Status in a Temporal Bone Preparation*. Midwinter Meeting of the Association for Research in Otolaryngology, *Baltimore, MD, 2011* [poster presentation]
- Hamade, M.A., **Merchant, G.R.**, Mafoud, L., Halpin, C., Nakajima, H.H., Merchant, S.N., Rosowski, J.J. *Energy Reflectance and Laser-Doppler Vibrometry: Noninvasive Tools to Diagnose Middle-Ear Pathologies*. Midwinter Meeting of the Association for Research in Otolaryngology, *Baltimore, MD, 2011* [poster presentation]
- Voss, S.E., **Merchant, G.R.** & Horton, N.J. *Effects of middle-ear disorders on ear-canal reflectance measures in human cadaver ears*. Meeting of the Acoustical Society of America, *Baltimore, MD 2010* [poster presentation]
- Merchant, G.R.**, Stepp, C.E. Heaton, J.T. & Hillman, R.E. *Relative Fundamental Frequency in Patients with Vocal Hyperfunction*, Midwinter Meeting of the Association for Research in Otolaryngology, *Anaheim, CA 2010* [poster presentation]
- Merchant, G.R.**, Horton, N.J. & Voss, S.E. *Normative Reflectance Measurements in Newborns*, American Auditory Society Annual Meeting, *Scottsdale, AZ 2009* [poster presentation]
- Merchant, G.R.** & de Villiers, J.G. *How Optimized Intervention Software Benefits Grammar Skills in Young Oral Deaf Children*, Council for Exceptional Children's Convention and Expo, *Boston, Ma, 2008* [podium presentation]
- Merchant, G.R.** & de Villiers, J.G. *Children's Understanding of Opaque Contexts*, Biennial Society for Research in Child Development Conference, *Boston, MA, 2007* [poster presentation]

FEATURES OF WORK IN PUBLIC MEDIA

National Institute of Health LabTV Documentary Series. Highlights work with mentors Dr. Karen Helfer and Dr. Richard Freyman on Speech Understanding, Hearing Loss, and Aging. <https://www.umass.edu/sphhs/news-events/labtv-profiles-communication-disorders-graduate-student-gabrielle-merchant>.

LabTV: Discover the people shaping the future of science, medicine and the care of patients. National Institute of Health funded documentary series. Highlights work with mentors Dr. Karen Helfer and Dr. Richard Freyman on Speech Understanding, Hearing Loss, and Aging. <http://www.labtv.com/Home/Profile?Area=&researcherId=2090>.

Research Laboratory of Electronics at the Massachusetts Institute of Technology News. <http://www.rle.mit.edu/ms-gabrielle-r-merchant-mr-thomas-gurry-and-ms-audrey-fan-named-recipients-of-the-2013-helen-carr-peake-awards/>. Discusses the 2013 Helen Carr Peake Award

Recipients.

Aetna Inc. Clinical Policy Bulletin: Voice Therapy, Number: 0646. *Last reviewed: 11/14/13.*
http://www.aetna.com/cpb/medical/data/600_690/0646.html. Cites Stepp, C.E., **Merchant, G.R.**,
Heaton, J.T., Hillman, R.E. (2011) Effects of Voice Therapy on Relative Fundamental
Frequency during Voicing Offset and Onset in Patients with Vocal Hyperfunction, *Journal of
Speech, Language, and Hearing Research*, 54, 1260-1266.

Kay Pentax Connection “Publications of Interest”, March 2012. Highlights: Stepp, C.E.,
Merchant, G.R., Heaton, J.T., Hillman, R.E. (2011) Effects of Voice Therapy on Relative
Fundamental Frequency during Voicing Offset and Onset in Patients with Vocal Hyperfunction,
Journal of Speech, Language, and Hearing Research, 54, 1260-1266.