

CURRICULUM VITAE

Ianessa Alicia Humbert, Ph.D., CCC-SLP

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointments

Associate Professor
Department of Communication Sciences and Disorders
University of Iowa

Personal Data

University of Iowa
Department of Communication Sciences and Disorders
250 Hawkins Drive
Iowa City, IA 52242
ianessa-humbert@uiowa.edu

Education and Training

1998 Bachelors of Arts, University of South Florida, Speech Language Pathology
2000 Masters of Science, Howard University, Speech Language Pathology
2003 Pre-doctoral intramural research award – National Institutes of Health (NINDS)
2005 Doctor of Philosophy, Howard University, Speech Language Pathology
2007 Post-doctoral Fellowship, University of Wisconsin, Swallowing Neurophysiology

Professional Experience

2008-2015 Assistant and Associate Professor, Johns Hopkins University, School of Medicine
2009-2011 Adjunct Professor, University of the District of Columbia
2010-2011 Adjunct Professor, Howard University
2012-2013 Adjunct Professor, George Washington University
2012-2013 Adjunct Professor, Texas Tech University, Lubbock TX
2013-2014 Adjunct Professor, University of Maryland College Park
2013-2014 Adjunct Professor, University of Maryland Baltimore

RESEARCH ACTIVITIES

SYNOPSIS OF RESEARCH FOCUS

My research program is focused on the physiological mechanisms of swallowing disorders and the development of rehabilitation strategies for dysfunction. My interests center on the peripheral and central control of swallowing in normal and impaired function. More recently, a major interest of my research program has been to understand the neural mechanisms underlying normal and disordered swallowing and how principles of motor learning can be applied to examine these as well as swallowing interventions. In this context, my research involves neural stimulation, neural imaging, and peripheral perturbation studies of swallowing in humans. These studies focus on aspects of age-related decline and neurogenic dysphagia and how rehabilitation can be more effective when implementing skill learning and/or adaptation to perturbations. The techniques used in my laboratory include videofluoroscopy, transcranial direct current stimulation, transcranial magnetic stimulation, electromyography, and kinematic and behavioral assessments. A secondary and emerging research focus is clinical decision making in dysphagia management among Speech Language Pathologists (SLP). Specifically, we are investigating practice patterns in dysphagia management and how formal and/or informal training and improve SLP knowledge base in swallowing and swallowing impairments.

Publications: Peer-reviewed Original Science Research

1. **Humbert IA**, Poletto C, Saxon K, Kearney P, Crujido L, Wright-Harp W, Payne J, Sonies B, Ludlow C. The Effect of Surface Electrical Stimulation on Hyo-Laryngeal Movement in Normal Individuals at Rest and During Swallowing. *Journal of Applied Physiology*. 2006; 101(6). 1657-63.
2. Ludlow C, **Humbert I**, Saxon K, Poletto C, Sonies B, Crujido L. The Effects of Surface Electrical Stimulation both at Rest and During Swallowing in Chronic Pharyngeal Dysphagia. *Dysphagia*. 2007; May 23: 1-10
3. **Humbert IA**, Robbins JA. Normal swallowing and functional magnetic resonance imaging: A systematic review. *Dysphagia*. 2007 Jul;22(3): 266-75.
4. **Humbert IA**, Poletto C, Saxon K, Kearney P, Ludlow C. The Effect of Surface Electrical Stimulation on Vocal Fold Position. *Laryngoscope*. 2008 Jan;118(1):14-19.
5. **Humbert IA**, Reeder S, Porcaro E, Kays S, Brittain J, Robins J. Simultaneous estimation of tongue volume and fat fraction using IDEAL-FSE. *Journal of Magnetic Resonance Imaging*. 2008 Aug;28(2):504-8.
6. **Humbert IA**, Fitzgerald M, McLaren D, Johnson S, Porcaro E, Kosmatka K, Hind K, Robbins J. Neurophysiology of Swallowing: Effects of Age and Bolus Type. *Neuroimage*. 2009 Feb 1;44(3):982-91.
7. **Humbert IA**, McLaren D, Kosmatka K, Fitzgerald M, Johnson S, Porcaro E, Kays S, Umoh E, Robbins J. Early deficits in cortical control of swallowing in Alzheimer's disease. *Journal of Alzheimer's Disease*. 2010;19(4):1185-97.
8. **Humbert IA**, McLaren D, Malandraki G, Johnson S, Robbins J. Swallowing intentional off-state in aging and Alzheimer's disease: A preliminary study. *Journal of Alzheimer's Disease*. 2011;26(2):347-54.
9. **Humbert IA**, Joel S. Tactile, gustatory, and visual biofeedback stimuli modulate neural substrates of deglutition. *Neuroimage*. 2012 Jan 16;59(2):1485-90.
10. **Humbert IA**, Lokhande A, Christopherson H, German R, Stone A. Adaptation of swallowing hyo-laryngeal kinematics is distinct in oral versus pharyngeal sensory processing. *J Appl Physiol*. 2012 May;112(10).
11. **Humbert IA**, Christopherson H, Lokhande A, German R, Gonzalez-Fernandez M, Celnik P. Human hyo-laryngeal movements show adaptive motor learning during swallowing. *Dysphagia*. 2012 Jun;28(2):139-45.
12. **Humbert IA**, German RZ. New directions for understanding neural control in swallowing: The potential and promise of motor learning. *Dysphagia*. 2013 Mar;28(1): 1-10.
13. Gonzalez-Fernandez M, **Humbert IA**, Winegrad H, Cappola A, Fried L. Dysphagia in old-old women: Prevalence as determined by self-report and the 3 oz. water swallowing test. *Journal of American Geriatric Society*. 2014 Apr;62(4):716-20
14. Macrae P, Anderson C, Taylor-Kamara I, **Humbert IA**. The effects of feedback on volitional manipulation of airway protection during swallowing. *Journal of Motor Behavior*. 2014 Feb 1
15. Macrae, P., Anderson, C., **Humbert, IA**. Mechanisms of airway protection during chin-down swallowing. *J Speech Lang Hear Res*. 2014 Aug;57(4):1251-8
16. **Humbert IA**, McLaren DG. Differential psychophysiological interactions of insular sub-divisions during varied oropharyngeal swallowing tasks. *Physiological Reports*. 2014 Mar 27;2(3)
17. **Humbert IA**, Christopherson H, Akshay L. Surface electrical stimulation perturbation context determines the presence of error-reduction in swallowing hyo-laryngeal kinematics. *American Journal of Speech Language Pathology*. 2015 Feb 1;24(1):72-80
18. Starmer H, Quon H, Kumar R, Alcorn S, Murano E, Jones B, **Humbert IA**. The effect of radiation dose on swallowing: Evaluation of aspiration and kinematics. *Dysphagia*, 2015 Aug;30(4):430-7
19. Anderson, C, Macrae, P, Kamara-Taylor, I, Serel, S, Vose, A, **Humbert, IA**. The perturbation paradigm modulates error-based learning in a highly automated task: Outcomes in swallowing kinematics. *Journal of Applied Physiology*, 2015 Aug
20. Azola A, Macrae P, Kamara-Taylor I, Anderson C, Greene L, **Humbert IA**. The relationship between submental surface electromyography and hyo-laryngeal kinematic measures of Mendelsohn Maneuver duration. *Journal of Speech Language Hearing Research*, 2015 Oct 1.
21. Young, J., Macrae, P., Anderson, C., Kamara-Taylor, I, **Humbert, I**. The Sequence of Swallowing Events During the Chin Down Posture. *American Journal of Speech Language Pathology*. 2015, Nov.
22. Szczesniak, M., McLean, J. Jolyne, X., **Humbert, IA.**, Pete, X., Quon, H., Cook, I. Videofluoroscopic

- swallow examination does not accurately detect cricopharyngeal radiation strictures. *Otolaryngology-Head and Neck Surgery*, May 3, 2016.
23. Tabor, L., Rosado, K., Hegland, K., Humbert, I., Plowman, E. Respiratory Training in an Individual with Amyotrophic Lateral Sclerosis. *Annals of Clinical and Translational Neurology*. In Press.
 24. Azola, A., Sunday, K., **Humbert, IA**. Kinematic visual biofeedback improves accuracy of learning a swallowing maneuver and accuracy of clinician cues during training. *Dysphagia*. 2017 Feb;32(1):155-122.
 25. Calvo, I. Sunday, K, Macrae, P. **Humbert IA**. Effects of chin-up posture on sequence of swallowing events. *Head Neck*. 2017 May;39(5):947-959.
 26. Guedes, R., Azola, A., Macrae, P., Sunday K., Mejia, V., **Humbert IA**. Examination of swallowing maneuver training and transfer of practiced behaviors to laryngeal vestibule closure kinematics in functional swallowing of healthy adults. *Physiological Behavior*. 2017 May 15;174:155-161.
 27. Park, SH., Casamento-Moran, A., Singer, M., Ernster, A., Yacoubi B., **Humbert, IA.**, Christou, EA. Integration of visual feedback and motor learning: Corticospinal vs. corticobulbar pathway. *Human Movement Science*. 2018 Jan 17; 58:88-96.
 28. **Humbert, IA.**, Sunday, K., Karagirogus, E., Vose, A., Gould, F., Greene, L. Tolar, A., Rivet, A. Swallowing kinematic differences across frozen, mixed, and ultra thin liquid boluses in healthy adults: Age, sex, and normal variability. *Journal of Speech Language Hearing Research*. 2018 Jul 13;61(7):1544-1559
 29. Plowman, E and **Humbert, IA**. Elucidating Inconsistencies in Dysphagia Diagnostics: Redefining Normal. *International Journal of Speech-Language Pathology*. 2018 Jun;20(3):310-317
 30. Ernster, A., Park, SH., Basma, Y., Christou, E., Casamento-Moran, A., Singer, M., **Humbert, IA**. Motor transfer from the corticospinal to the corticobulbar pathway. *Physiology and Behavior*. 2018 Jul 1;191:155-161
 31. Selen, S., Azola, A., Sunday, K., Vose, A., Plowman, E., Tabor, T., Singer S., Robeson, R., **Humbert IA**. Effects of submental surface electrical stimulation on swallowing kinematics in healthy adults: An error-based learning paradigm. *American Journal of Speech Language Pathology*. In Press.
 32. Mulheren, R., Azola, A., **Humbert, IA.**, Palmer, J, Gonzalez-Fernandez, M. Swallowing changes in community-dwelling older adults. *Dysphagia*. 2018 Jun 8
 33. Vose, A., and **Humbert, IA**. Hidden in Plain Sight: A descriptive review of Laryngeal Vestibule Closure. *Dysphagia*. In Press.
 34. Vose, A., Sunday, K., Kesneck, S., Plowman, I., **Humbert, IA**. A survey of clinician decision making when identifying swallowing impairments and determining treatment. *Journal of Speech Language Hearing Science*. In Press.
 35. Pulia, N., **Humbert, IA.**, Kolehmainen, C., Carnes, M. How gender stereotypes may limit female faculty advancement in Communication Sciences and Disorders. *American Journal of Speech Language Hearing Sciences*. In press.
 36. Taste perception and swallow screen results in old-old women. Mulheren, RM, **Humbert, IA**, Cappola, AM, Fried, L, González-Fernández, M. *Geriatrics*. In press.
 37. Kinematic visual biofeedback improves accuracy of swallowing maneuver training and accuracy of clinician cues during training in post-stroke patients with dysphagia. Vose, AK., Marcus, A., **Humbert IA**. *Archives of Physical Medicine and Rehabilitation*. Nov;11(11):1159-1169
 38. Miller, M., Vose, A., Rivet, A., Smith-Sherry, M., **Humbert, IA**. Validation of the Normalized Laryngeal Constriction Ratio in Normal and Disordered Swallowing. *Laryngoscope*. 2019 Aug 26.

Inventions, Patents, Copyrights

2007 Methods for recovery from motor control via stimulation to a substituted site to an affected area, Passy Muir®, Active.

Extramural Funding

Current Grants

2018-2023 Laryngeal Adaptation in Speech and Swallowing

1 R01 DC016275-01A1
National Institutes of Health
Total direct costs: 1,250,000
Principal Investigator, 25% effort

2014-2019 Applying Motor Learning Principles to Dysphagia Rehabilitation
1 R01 DC014285-01A1
National Institutes of Health
Total direct costs: 1,250,000
Principal Investigator, 25% effort

Completed Grants

2014-2017 Applying Motor Learning Principles to Dysphagia Rehabilitation after Stroke
14BGIA20380348
American Heart Association
Total direct costs: 154,000
Principal Investigator: 10% effort

2014-2016 Creating swallowing physiologists by applying physiology to clinical decision-making
American Speech Language Hearing Foundation
Total Direct Costs: 75,000
Principal Investigator: 0% effort

2009-2015 Effects of Aging on Swallowing Physiology with Transient Cortical Disruption
1K23DC010776-01
National Institutes of Health
Total direct costs: \$1,069,130
Principal Investigator, 50% effort

2006-2008 Swallowing Physiology and Neurophysiology in Alzheimer's and Lewy Body Disease.
Wisconsin Comprehensive Memory Program
Total direct costs: \$25,000
Co-Investigator
Research costs only

Research Program Building / Leadership

2015-present Swallowing Systems Core, Co-Director
2008-present Swallow Neurophysiology Laboratory, Chief.
2013-2015 Physical Medicine and Rehabilitation Research Colloquium, Coordinator
2017-present Rehabilitation Social and Science Seminars, Chair

EDUCATIONAL ACTIVITIES

Educational Publications

Invited Review Papers

1. **Humbert IA**, Robbins JA. Dysphagia in the Elderly. *Phys Med Rehabil Clin N Am.* 2008. Nov;19(4):853-66
2. **Humbert IA**, Michou E, MacRae PR, Crujido L. Electrical stimulation and swallowing: How much do we know? *Semin Speech Lang.* 2012 Aug;33(3):203-16.
3. Macrae P, **Humbert IA**. Exploiting Experience-Dependent Plasticity in Dysphagia Rehabilitation: Current Evidence and Future Directions. *Current Physical Medicine and Rehabilitation Reports.* Volume 1 (4) – Dec 1, 2013.

Editorials

1. **Humbert IA**, Ludlow C. Electrical Stimulation for Dysphagia. The ASHA Leader. March 16, 2004.
2. **Humbert IA**. Transient cortical stimulation to alter swallowing physiology. Perspectives on Swallowing and Swallowing Disorders (Dysphagia). March 2010; 16-20.
3. **Humbert IA**. Stimulating Swallowing: Essential central and peripheral nervous system targets. The ASHA Leader. August 2, 2011.
4. **Humbert IA**. Point Counterpoint: Electrical Stimulation for Dysphagia. Perspectives on Swallowing and Swallowing Disorders (Dysphagia). December 2011. 102-108.

Books, Textbooks

1. **Humbert, IA.**, Swallowing Pocket Guide: A Quick Reference for Muscles and Innervation. Northern Speech Services. 2011.

Other Media

1. **Humbert IA**. Electrical Stimulation In The Normal And Impaired Swallow. Northern Speech Services. 2012. E-course.
2. **Humbert IA**. Panther K, Arnold R, Lazarus C, Brush J, Gross R., Dysphagia Practice: Moving Toward More Comprehensive Treatment Protocols. Northern Speech Services. 2012. E-course.
3. **Humbert IA**. Swallowing Physiology: Understanding Its Relationship To Traditional Swallowing Treatments. Northern Speech Services. 2013. E-course.
4. **Humbert, IA**. Understanding the events of swallowing in normal and disordered adults: A research-based course. Medbridge. 2015. E-course
5. Ernster, A and **Humbert, IA**. Swallowing difference versus disorder: The power of perspective. Dysphagia Café, January 2, 2018
6. **Humbert, IA**. Challenge the swallow: Testing the limits of dysphagia management, Dysphagia Café, September 12, 2016.
7. **Humbert, IA**. Critical Thinking in Dysphagia Management, Dysphagia Café, October 6, 2015.

Teaching

Classroom Instruction

- | | |
|--------------|---|
| 2002 | Teaching methods, Instructor for 30 undergraduates. Spring Semester course at Howard University. |
| 2009-2010 | Dysphagia in special populations, Instructor for 15 graduate students (masters) in an intensive summer course at the University of the District of Columbia. |
| 2012 | Anatomy and physiology of the speech and swallowing mechanisms. Instructor for 35 undergraduate and masters students at George Washington University. |
| 2013 | Anatomy and physiology of the speech and swallowing mechanisms. Instructor for 50 undergraduate and graduate students at the University of Maryland College Park. |
| 2014 | Feeding, swallowing, and jaw muscle functions. Lecturer for 2 special lectures for 30 Dental students at the University of Maryland Baltimore. |
| 2015-present | Dysphagia Management and Lab. Instructor for 4 credit hour course. |
| 2017-present | Anatomy and Physiology of Speech and Swallowing. Instructor for two-3-credit hour sections. |

Clinical Instruction None

Clinical Education Instruction (Peer-Reviewed)

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| 2004 | SLP Health Care Forum: Clinical Hot Topics. Invited Speaker. American Speech Language Hearing Association Annual Convention, Philadelphia, PA. |
| 2005 | Effect of Surface Electrical Stimulation on Hyo-laryngeal Movement in Healthy Individuals at Rest and During Swallowing. Speaker. National Institutes of Health. Bethesda, MD. |
| 2005 | The Use of Coordination Training for the Onset of Intramuscular Stimulation in Dysphagia. International Functional Electrical Stimulation Society, San Diego, CA. |

- 2005 The Effects of Surface Electrical Stimulation in Healthy Controls. Speaker. American Speech Language Hearing Association Annual Convention, San Diego, CA.
- 2005 Swallowing Safety Scale: A New Assessment Tool. Co-Author. American Speech Language Hearing Association Annual Convention, San Diego, CA.
- 2006 The Effects of Intramuscular Stimulation on Swallowing Safety in Chronic Pharyngeal Dysphagia. Co-Author. Dysphagia Research Society. Scottsdale, AZ.
- 2006 The Effects of Surface Electrical Stimulation (SES) on Hyo-Laryngeal Movement at Rest and During Swallowing. Speaker. Dysphagia Research Society. Scottsdale, AZ.
- 2006 Lingual Exercise, Age-Related Disease & Neuromuscular Plasticity. Speaker. American Speech Language Hearing Association Annual Convention, Miami, FL.
- 2007 Swallowing Neurophysiology in Healthy Younger and Older Adults. Speaker. Dysphagia Research Society. Vancouver, BC, Canada.
- 2007 Tissue in Healthy Younger and Older Adults: MRI Fat-Water Separation Using IDEAL Method, Part I. Speaker. Dysphagia Research Society. Vancouver, BC, Canada.
- 2007 Lingual Tissue in Individuals after stroke: MRI Fat-Water Separation Using IDEAL Method, Part II. Co-Author. Dysphagia Research Society. Vancouver, BC, Canada.
- 2008 Age-related differences in swallowing neurophysiology: an fMRI study. Speaker. Society for Neuroscience. Washington, DC.
- 2009 Effects of Transient Cortical Disruption on Swallowing Initiation. Speaker. Dysphagia Research Society. New Orleans, LA.
- 2009 Cortical control of swallowing in early Alzheimer's disease: A fMRI study. Speaker. International conference on Alzheimer's disease. Vienna, Austria.
- 2010 Physiological effects of electrical stimulation on swallowing. Adult Service Delivery Committee, Maryland Speech and Hearing Association. Loyola University, Columbia MD.
- 2010 Effects of Transient cortical disruption on swallowing physiology. Speaker. International Association of Logopedics and Phoniatics. Athens, Greece.
- 2011 Experimentally induced perturbations of hyolaryngeal movement do not cause predictive error corrections. Speaker. Dysphagia Research Society. San Antonio, TX.
- 2011 Taste and Swallowing Function in the Oldest Old. Co-Author. Gerontological Society of America, 64th Annual Scientific Meeting. Boston, MA.
- 2012 Connectivity of the insula during swallowing with exogenous and endogenous tasks. Speaker. Dysphagia Research Society, Toronto, Ontario, Canada.
- 2013 Non-invasive Brain Stimulation Techniques: A Hands-On Experience. Speaker. American Academy of Physical Medicine and Rehabilitation. Washington, DC.
- 2013 Evidence-Based Practice in Adult Dysphagia Management. Speaker. American Speech Language Hearing Association Annual Convention. Chicago, IL.
- 2013 How to Use Motor Learning Principles to Understand Swallowing Function. Speaker. American Speech Language Hearing Association Annual Convention. Chicago, IL.
- 2014 Kinematic Feedback Improves Swallowing Maneuver Outcomes. Presenter. Dysphagia Research Society. Nashville, TN.
- 2014 Correcting for head movement during measures of hyoid displacement. Co-Author. Dysphagia Research Society. Nashville, TN.
- 2014 Relationship among radiation dose, aspiration, and swallowing kinematics. Co-Author. Dysphagia Research Society. Nashville, TN.
- 2014 Effects of cortical stimulation on swallowing maneuver performance. European Society for Swallowing Disorders. Brussels, Belgium.
- 2014 Adaptation of swallowing hyo-laryngeal kinematics is distinct in oral versus pharyngeal sensory processing. Neural mechanisms of feeding and swallowing. Satellite meeting of the Society for Neuroscience. Washington DC.
- 2014 Critical thinking skills for dysphagia management. American Speech Language Hearing Association Annual Convention. Orlando FL.
- 2014 The effect of surface electrical stimulation of swallowing sequence of events. American Speech Language Hearing Association Annual Convention. Orlando FL.

- 2015 Mechanism of airway protection during chin up swallowing. Senior Author. Dysphagia Research Society. Chicago IL
- 2015 Novel swallowing maneuver reduces Laryngeal Vestibule Closure reaction time. Senior Author. Dysphagia Research Society. Chicago IL
- 2015 Skill versus Strength: The Great Debate. Presenter. American Speech Language Hearing Association Annual Convention. Denver CO.
- 2015 Can Compensatory Strategies Challenge the Swallow? American Speech Language Hearing Association Annual Convention. Denver CO.
- 2016 A combination of feedback is needed to manipulate volitional airway protection during swallowing. Dysphagia Research Society. Poster. Senior Author
- 2016 Clinician Accuracy in Identifying Swallowing Pathophysiologies. Dysphagia Research Society. Poster. Senior Author.
- 2016 The effect of clinician feedback and biofeedback on learning a novel swallowing maneuver. Dysphagia Research Society. Poster. Senior Author.
- 2016 Videofluoroscopy does not accurately diagnose upper esophageal stricture. Dysphagia Research Society. Co-Author
- 2016 Critical Thinking in Dysphagia Management: Gainesville FL (UF)
- 2016 The role of augmented feedback in volitional manipulation of airway closure during swallowing. European society of swallowing disorders. Macrae, P., Kamara-Taylor, I., Anderson, C., Humbert I. September 2016. Milan, Italy.
- 2016 How does the chin up posture influence the sequence of swallowing events? Calvo, I., Sunday, K., Macrae, P., Humbert I. European society of swallowing disorders. September 2016. Milan, Italy.
- 2016 Swallowing frozen and mixed bolus consistencies: Kinematics in young and older healthy adults. Sunday, K., Vose, A., Greene, L., Karagorgios, E., Humbert I. European society of swallowing disorders. September 2016. Milan, Italy.
- 2016 Clinician accuracy in identifying swallowing pathophysiologies. Vose, A., Sunday, K., Plowman, E., Humbert, I. European society of swallowing disorders. September 2016. Milan, Italy.

Invited Speaking

- 2004 SLP Health Care Forum: Clinical Hot Topics. Invited Speaker. American Speech Language Hearing Association Annual Convention, Philadelphia, PA.
- 2007 Dysphagia in Early Alzheimer's Disease: A Videofluoroscopic Study. Invited Speaker. Gerontological Society of America Annual Convention. San Francisco, CA.
- 2007 SLP Health Care Forum: Clinical Hot Topics Electrical Stimulation for Swallowing Research: Comparing and Contrasting Protocols. Invited Speaker. American Speech Language Hearing Association Annual Convention, Boston, MA.
- 2008 The Effects of Electrical Stimulation on Laryngeal Function and Swallowing in Healthy and Disordered Individuals. Invited Speaker. Indiana Voice and Dysphagia Network. Indianapolis, IN.
- 2009 The Neurophysiology of Swallowing: Models of Healthy Aging and Neurodegeneration. Invited Speaker. District of Columbia Speech, Language and Hearing Association. Washington, DC.
- 2009 Electrical stimulation in normal and impaired swallowing. Invited Speaker. 39th Annual Colloquium in Speech-Language Pathology. Stockton, CA.
- 2009 Electrical Stimulation for Dysphagia. Invited Speaker. Good Samaritan Rehabilitation Seminar. Baltimore, MD.
- 2009 Swallowing Neurophysiology and Electrical Stimulation. Invited Speaker. Adult Service Delivery Committee, Maryland Speech and Hearing Association. Baltimore, MD.
- 2010 Physiological effects of electrical stimulation on swallowing. Adult Service Delivery Committee, Maryland Speech and Hearing Association. Winter Workshop. Loyola University, Columbia MD.
- 2010 The Neural Basis of Swallowing Impairment After Stroke. Invited Speaker. American Heart Association International Stroke Conference. San Antonio, TX.
- 2010 The Neurophysiology of Swallowing: What we know today. Invited Speaker. District of Columbia Speech, Language and Hearing Association. Washington, DC.

- 2010 Lessons learned as junior faculty. Invited Speaker. American Speech Language Hearing Association Annual Convention. Gaithersburg, MD.
- 2010 Electrical stimulation for swallowing. Invited Speaker. National Black Association for Speech, Language and Hearing. Tampa, FL.
- 2011 Concepts from motor learning for swallowing. Invited Speaker. Maryland Speech Language Hearing Association Annual Convention. Towson, MD.
- 2011 Sensory and motor functions in swallowing: Clinical implications from new research. Invited Speaker. American Speech Language Hearing Association Health Care and Business Institute. Rockville, MD.
- 2011 Swallowing neurophysiology from reflex to volition: The missing graduate course. Invited Speaker. American Speech Language Hearing Association Annual Convention, San Diego, CA.
- 2011 Is a Research Career Right for Me? Invited Speaker. American Speech Language Hearing Association Annual Convention, San Diego, CA.
- 2012 Effects of transient cortical disruption on swallowing initiation. Invited Speaker. Annual Meeting of the Japanese Society of Dysphagia Rehabilitation, Sapporo, Japan.
- 2012 New Concepts in Swallowing Neurophysiology. Invited Speaker. California Speech-Language-Hearing Association. San Jose, CA.
- 2013 Current topics in the Investigation of Swallowing. Invited Speaker. Adult Service Delivery Committee, Maryland Speech and Hearing Association. Winter Workshop. Mercy Hospital, Baltimore MD.
- 2013 Current topics in the investigation of swallowing. Invited Speaker. The Maryland Speech-Language-Hearing Association. Towson, MD.
- 2013 What dental hygienists need to know about swallowing. Invited Speaker. Northwest Virginia Dental Hygienists Association. Fairfax, VA.
- 2013 Good things come to those who investigate. Invited Speaker. Dysphagia Research Society. Seattle, WA.
- 2013 Applying principles of motor learning to deglutition. Invited Speaker. Dysphagia Research Society. Seattle, WA.
- 2013 Electrical stimulation for swallowing: Something old, something new. Invited Speaker. New York Methodist Hospital. Manhattan, NY.
- 2013 How motor learning can help us to understand swallowing. 2nd Congress of the Turkish Invited Speaker. Dysphagia Research Society. December 2013, Ankara, Turkey
- 2013 Using swallowing physiology to treat dysphagia. 2nd Congress of the Turkish Dysphagia Research Society. Invited Speaker. December 2013, Ankara, Turkey
- 2013 The effects of electrical stimulation on swallowing. 2nd Congress of the Turkish Dysphagia Research Society. Invited Speaker. December 2013, Ankara, Turkey
- 2014 Sensory and motor adaptation in swallowing airway protection. Invited Speaker. Northeastern Ohio Medical School, Rootstown, OH.
- 2014 Understanding swallowing in bite-sized portions. Invited Speaker. Speech and Hearing Canada, Annual Convention. Ottawa, Canada.
2014. Sensory and motor adaptation in swallowing airway protection. Invited Speaker. Northeastern Ohio Medical School, Rootstown, OH.
2014. Understanding swallowing in bite-sized portions. Invited Speaker. Speech and Hearing Canada, Annual Convention. Ottawa, Canada.
- 2014 Neural Control of Swallowing: Cortical and Subcortical Involvement. International Dysphagia Forum. Invited Speaker. Guangzhou, China.
2014. Critical Thinking in Dysphagia Management. Invited Speaker. Frazier Rehabilitation Institute.
2014. Critical Thinking in Dysphagia Management. Invited Speaker. University of South Florida.
2014. Penetration and Aspiration. Determining the source and probing treatment effects in the fluoro suite. Invited speaker. Meet the Masters Seminar. American Speech Language hearing Association Annual Convention. Orlando, FL.
2014. Understanding neural control in swallowing: The potential and promise of motor leaning. 3rd Congress of Swallowing Disorders. Ankara, Turkey.

- 2014. Swallowing cortical control: Healthy aging and Alzheimer's Disease. 3rd Congress of Swallowing Disorders. Ankara, Turkey.
- 2015 Critical Thinking in Dysphagia Management. Presenter. Johns Hopkins University. Baltimore MD.
- 2015 Brain Plasticity. European Society for Swallowing Disorders. Brain Plasticity. Invited speaker. Barcelona Spain.
- 2015 Critical Thinking in Dysphagia Management. ENT SAAA SASLHA Congress. Durban, South Africa.
- 2015 Kinematic feedback improves swallowing maneuver outcomes. Brooks Rehabilitation. Presenter.
- 2015 Kinematic feedback improves swallowing maneuver outcomes. Shands Rehabilitation Hospital. Presenter.
- 2016 Motor Learning, Swallowing and Cerebellar Damage. Dysphagia Research Society.
- 2016 Dysphagia Management. Florida Stroke Symposium. Deerfield Beach Florida. Invited Speaker
- 2016 Neural Plasticity. Brazil Swallowing Congress. Invited Speaker. Ribeirao Preto, Brazil. Invited Speaker
- 2016 Critical Thinking in Dysphagia Management. ASHA Connect. Minneapolis MN. Invited Speaker
- 2016 Critical Thinking in Dysphagia Management. University of California San Francisco. San Francisco CA. Invited Speaker
- 2016 Critical Thinking in Dysphagia Management. Providence Hospital. Olympia WA. Invited Speaker
- 2016 Critical Thinking in Dysphagia Management. Central Missouri Symposium on Medical Speech Pathology. Columbia MO. Invited Speaker
- 2016 Elucidating Inconsistencies in Dysphagia Management. Brooks Rehabilitation. Jacksonville FL. Invited Speaker.
- 2017 Critical Thinking in Dysphagia Management. Massachusetts General Hospital. Boston MA. Invited Speaker
- 2017 Advances in the interpretation of instrumental dysphagia evaluations. Irish Association of Speech-Language Therapists. Dublin Ireland
- 2017 Dysphagia rehabilitation: what is the evidence? Irish Association of Speech-Language Therapists. Dublin Ireland
- 2017 Critical Thinking in Dysphagia Management. Utah State University. Logan UT. Invited Speaker
- 2017 Critical Thinking in Dysphagia Management. Karlsbad Klinikum. Karlsbad Germany. Invited Speaker
- 2017 Critical Thinking in Dysphagia Management. Riverside Methodist Hospital , Columbus, Ohio. Invited Speaker
- 2017 Critical Thinking in Dysphagia Management. M.D. Anderson. Houston, Texas, Invited Speaker
- 2017 Critical Thinking in Dysphagia Management. Oregon Speech Language Hearing Association, Invited Speaker.
- 2017 Critical Thinking in Dysphagia Management. Annual Oklahoma Academy of Medical Speech-language Pathologists (OAMSPLP) Conference. Invited Speaker.
- 2018 Oral sensory-motor integration for planning the movements of a swallow: What is necessary? Invited Speaker. Auditory Cognitive Neuroscience meeting. University of Florida. Tampa Florida. Invited Speaker.

Mentoring

Advisees

- 2018 Alycia Rivet, CCC-SLP, Doctoral Student
- 2017-present Alayna Ernster, B.A., Doctoral Student
- 2016-present Danny Nunn, Doctoral Student
- 2016-present Michele Singer, CCC-SLP, Doctoral Student
- 2014-present Alicia Vose, CCC-SLP, Doctoral Student
- 2016-2017 Renata Guedes, Ph.D., Post-doctoral fellow
- 2014-2018 Kirstyn Sunday, B.A., Master's Graduate Student
- 2014-2015 Alba Azola, M.D., Post-Doctoral Fellow
- 2014-2015 Lindsey Greene, B.A., Research Assistant

2010-2013 Regina Campbell-Malone Ph.D., currently Director of STEM Initiatives, Laurel School.
 2012-2014 Phoebe Macrae Ph.D. currently assistant scientist, University of Canterbury
 2011-2014 Isha Taylor-Kamara, B.A., graduate student at the University of the District of Columbia
 2012-2014 Jennifer Young, B.A. currently a Master's Thesis Student of Towson University
 2013 Charles Olaleye M.D. Visiting Researcher
 2011-2013 Cheryl Anderson, M.S. currently a research assistant at Johns Hopkins University
 2010-2013 Shaina Holman, Ph.D., Doctoral Student, currently a dental student at University of MD, Balt
 2012-2013 Susan Knight, M.S. currently a clinical Speech-Language Pathologist
 2010-2012 Akshay Lokhande, M.D. Research Assistant, currently Psychiatry resident at St. Elizabeth
 2010-2011 Phong Kieu, M.D., currently a Physiatrist, West Springfield MA
 2011-2012 Heather Christopherson, currently a clinical Speech Language Pathologist
 2008-2009 Eno Umoh, M.S., currently a clinical Speech Language Pathologist

Thesis and Dissertation Committees

2011-2013 Shaina Holman, Ph.D. Swallowing Physiology, Doctoral Dissertation Committee Member.
 2013– present Jennifer Young, B.A., Swallowing Physiology, Master's Thesis Advisor.
 2015-2016 Sara Kesneck, CFY-SLP, Graduate thesis, Master's Thesis Advisor.
 2016-present Melissa Miller, CFY-SLP, Graduate thesis, Master's Thesis Advisor.
 2016-2017 Marcella Vurro, CFY-SLP, Graduate thesis, Master's Thesis Advisor.
 2016-2017 Madison Eouse, B.A., Undergraduate thesis, Undergraduate Thesis Advisor.
 2016-2017 Karly Johnson, B.A., Undergraduate thesis, Undergraduate Thesis Advisor.
 2016-2017 Veerley Mejia, B.A., Undergraduate thesis, Undergraduate Thesis Advisor.
 2015-present Lauren Tabor, Doctoral Committee
 2016-2018 Seoung Hoon Park, Doctoral Committee
 2017-present Jayoung Kim, Doctoral Committee

Training Grant Participation

2010-2014 Research Training in Rehabilitation for Brain Injury and Neurological Disability
 5 T32 HD007414
 Role: Faculty Advisor
 2017-present Breathing research and therapeutics (BREATHE)
 1T32HL13462101a1
 Role: Faculty Advisor

CLINICAL ACTIVITIES

Certification

Medical

2002-Present Certificate of Clinical Competence in Speech Language Pathology, #12052660
 2009-Present Maryland License for Speech-Language Pathology, #04974
 2013-Present District of Columbia License for Speech-Language Pathology, # SLP000721

Boards

None

Clinical (Service) Responsibility

2009 Speech Language Pathologist, Out-patient rehabilitation, 20% effort
 2014 Speech Language Pathologist, in-patient rehabilitation, 20% effort

Clinical Program Building/Leadership None

Clinical Extramural Funding None

SYSTEM INNOVATION AND QUALITY IMPROVEMENT ACTIVITIES

None

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments None

Editorial Activities

Editorial Board Appointments

2009-2012 Associate Editor. Journal of Alzheimer's Disease.
2013-2014 Invited Editor. Special issue BioMed Research on Dysphagia.

Journal Reviewer

2013-2014 Neuroimage
2013 Human Brain Mapping
2012 Journal of Neurophysiology
2013 – present Neurology
2012-present Archives of Physical Medicine and Rehabilitation
2011-present Journal of Applied Physiology
2010-present Laryngoscope
2012 PLOS ONE
2012-present American Journal of Speech, Language, Hearing Research
2010 –present Journal of Speech, Language, Hearing Research
2009- present Dysphagia
2018 Cerebrovascular Disease

Advisory Committees, Review Groups/Study Sections

2009 Review Group. American Speech Language Hearing Foundation
2011, 2014 Review Group. Wisconsin Alzheimer's Disease Research Consortium Pilot Grants
2012 Review Group. American Speech Language Hearing Foundation
2013 Review Group. Howard University Summer Faculty Fellowship Awards.
2011, 2012, 2014 Study Section. Veterans Administration. Sensory Systems and Communication Disorders
2014 Program Committee. Dysphagia Research Society Early Investigator Initiative
2014, 2016 Ad hoc study section. Motor Function Speech and Rehabilitation, National Institutes of Health
2017 Ad hoc study section, Chief, Digestive, Kidney and Urological Systems (DKUS)
Integrated Review Group, National Institutes of Health

Professional Societies

2007-2010 Awards Committee Special Interest Division 13, Swallowing and Swallowing Disorders
2011-2012 Abstract Committee, Dysphagia Research Society
2011-Present Public Relations Committee, Dysphagia Research Society
2012-2014 Membership Committee, Dysphagia Research Society
2014-Present Communications Committee. American Congress of Rehabilitation Medicine, Stroke Interdisciplinary Special Interest Group
2014-present Chair, Website Communication and Public Relations Committee (2015-present). Dysphagia Research Society.
2018 American Heart Association

Conference Organizer, Session Chair

2005-2009 Special Interest Division 13 Research Committee for Swallowing and Swallowing Disorders.

- 2007 Research Topic Program Committee, American Speech Language Hearing Association.
- 2010 Chair, Scientific Paper/Poster Review and Minority Travel Award Committee. NIH/NIDCD
Sponsored grant: Integrative Neural Systems Underlying Vital Aerodigestive Tract
Functions.
- 2012 Conference Organizing Committee, Dysphagia Research Society
- 2014 Co-Chair, Neural mechanisms of feeding and swallowing. Satellite meeting of the Society for
Neuroscience. Washington DC.

INVITED ATTENDEE COMPETITIVE AWARDS

- 2006 NIA Summer Institute on Aging Research.
- 2006 Minority Student Leadership Travel Award. American Speech Language Hearing Association.
- 2008 Lessons for Success Attendance Award. American Speech Language Hearing Association.
- 2008 Mentoring pair attendance award. American Speech Language Hearing Association.
- 2009 Travel Scholarship, International Conference on Alzheimer's Disease
- 2011 NIDCD Workshop for New Clinician-Investigators in Communication Disorders: Strategies for
Success.
- 2011 Johns Hopkins University Office of Women in Science and Medicine. Leadership Program for
Women Faculty.
- 2012 NINDS Grant Writing Workshop for Diverse Researchers.

RECOGNITION

Awards

- 2002 Doctoral Leadership Program Award. Tuition and stipend for doctoral training at Howard University
- 2005 Best Doctoral Oral Presentation in Arts and Sciences Department. Howard University.
- 2006 New Investigator Award. Dysphagia Research Society.
- 2009 New Investigator Award. Dysphagia Research Society.
- 2010 Early Career Contributions in Research. American Speech Language Hearing Association
- 2011 Distinguished Alumna Award. Howard University.