

# Erin Kamarunas, Ph.D., CCC-SLP

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## ACADEMIC POSITIONS

### **Associate Professor**                      **2014- Present**

James Madison University, Harrisonburg, VA  
Director, Neural Bases of Communication and Swallowing Laboratory  
Co-Director, Voice and Swallow Service, Sentara RMH Hospital

## EDUCATION

### **Post-Doctoral Fellow**                      **2012-2014**

Research associate at James Madison University Neural Bases of Communication and Swallowing Laboratory, Harrisonburg, VA  
Mentor: Christy Ludlow

### **Doctor of Philosophy**                      **2012**

Adult Swallowing Disorders, University of Arkansas for Medical Sciences, Little Rock, Arkansas  
Title: "Effects of topic nasal anesthesia on flexible endoscopic examination of swallowing with sensory testing on healthy participants"  
Mentor: Gary McCullough

### **Master of Science**                      **2007**

Speech-Language Pathology, University of Arkansas for Medical Sciences, Little Rock, Arkansas

### **Bachelor of Science**                      **2005**

Communication Disorders, University of Arkansas, Fayetteville, Arkansas

## PROFESSIONAL MEMBERSHIPS

American Speech-Language Hearing Association  
Dysphagia Research Society  
Society for Functional Near Infrared Spectroscopy  
Special Interest Group 13- Swallowing

## PEER REVIEWED PUBLICATIONS

- Smith, J.B., **Kamarunas, E.**, & O'Donoghue, C. (2023). The Influence of Side-Lying Position on Oropharyngeal Swallow Function in At-Risk Infants: An Exploratory Study. *Clinical pediatrics*, Advance online publication. <https://doi.org/10.1177/00099228231159158>
- Kamarunas, E.**, Mulheren, R., Wong, S.M., Griffin, L. & Ludlow, C. (2022). The feasibility of home-based treatment using vibratory stimulation in chronic, severe dysphagia. *American Journal of Speech-Language Pathology*, 31(6), 2539-2556.
- Griffin, L., **Kamarunas, E.**, Kuo, C., O'Donoghue, C. (2022). Comparing amplitudes of transcranial direct current stimulation (tDCS) to the sensorimotor cortex during swallowing. *Experimental Brain Research*. 240(6), 1811-1822.
- Kamarunas, E.**, Szykiewicz, S., Griffin, L., Drulia, T., Murray, K. (2022). Mental practice of lingual resistance and cortical plasticity in older adults: An exploratory fNIRS study. *International Journal of Orofacial Myology and Myofunctional Therapy*, 48(1), 1-16.
- Drulia, T., **Kamarunas, E.**, O'Donoghue, C., Ludlow, C. (2021) An exploration of lung volume effects on swallowing in chronic obstructive pulmonary disease. *American Journal of Speech-Language Pathology*. 30(5): 2155-2168
- Szykiewicz, S., **Kamarunas, E.**, Drulia, T., Nobriga, C., Griffin, L., O'Donoghue, C. (2020) A randomized controlled trial comparing physical and mental lingual exercise for healthy older adults. *Dysphagia*. 2021 Jun;36(3):474-482.
- Wong, S.M., **Kamarunas, E.**, Ludlow, C. (2020) Impaired movement scaling and reduced synchrony with vestibule closure characterize swallowing in severe dysphagia. *Dysphagia*. 35(4), 643-656.
- Kamarunas, E.**, Wong, S.M., Ludlow, C. (2019) Laryngeal vibration increases spontaneous swallowing rates in chronic oropharyngeal dysphagia. *Dysphagia*. 34(5), 640-653.
- Kamarunas, E.**, Mulheren, R., Palmore, K., Ludlow, C. (2018) Timing of cortical activation during spontaneous swallowing. *Experimental Brain Research*. 236(2), 475-484.
- Mulheren, R., **Kamarunas, E.**, Ludlow, C. (2016) Sour taste increases swallowing and prolongs cortical responses in the swallowing network. *Journal of Neurophysiology*. 116(5), 2033-42.
- Kamarunas, E.**, McCullough, G., Mennemeier, M., Munn, T. (2015) Perception of liquid volume changes with age. *Journal of Oral Rehabilitation*. 42(9), 657-662.
- Rangarathnam, B., **Kamarunas, E.**, McCullough, G. (2014) Role of cerebellum in deglutition and deglutition disorders. *Cerebellum*. 13(6), 767-76.
- Kamarunas, E.**, McCullough, G.H., Guidry, T., Schluterman, K., Mennemeier, M. (2014) Effects of topical nasal anesthetic on fiberoptic endoscopic examination of swallowing with sensory testing (FEESST). *Dysphagia*. 29(1), 33-43.
- McCullough, G.H., **Kamarunas, E.**, Mann, G., Schmidley, J.W., Robbins, J.A., Crary, M.A. (2012) Effects of Mendelsohn maneuver on measures of swallowing duration post-stroke. *Topics in Stroke Rehabilitation*. 19(3), 234-43.

## PRESENTATIONS (Peer Reviewed)

- Szykiewicz, S.H., **Kamarunas, E.**, Drulia, T., Mulheren, R., Murray, K., Lee, T., & Griffin, L. (February, 2023). Insight on optimal delivery method for tongue strengthening. Invited oral presentation at the 2023 Speech and Hearing Association of Alabama Annual Convention.
- Drulia, T., Szykiewicz, S., Griffin, L., Mulheren, R., Murray, K., Lee, T., **Kamarunas, E.** (2022) A

- comparison of lingual pressure measures using two devices in older, community dwelling healthy adults. American Speech-Language-Hearing Association.
- Griffin, L., Szykiewicz, S., **Kamarunas, E.**, Drulia, T., Murray, K., Lee, T., Mulheren R. (2022) Determining an Optimal Delivery Method for Tongue Strengthening: Preliminary Analyses. American Speech-Language-Hearing Association.
- Smith, J., **Kamarunas, E.**, & O'Donoghue, C. (2022) Side-lying position to reduce aspiration in at risk infants? An analysis of nine case studies. Accepted for poster presentation at the Dysphagia Research Society. (online due to COVID)
- Mulheren, R. & **Kamarunas, E.** (2021) Using functional near-infrared spectroscopy to study cortical activation and plasticity in healthy and disordered swallowing. Accepted for oral presentation at the 2<sup>nd</sup> World Dysphagia Summit.
- Drulia, T., **Kamarunas, E.**, Szykiewicz, S., Griffin, L., Henn, M. (2021) Central control in mental practice during a tongue press task: A proof of concept study. Oral presentation at the Dysphagia Research Society (Online presentation).
- Griffin, L., **Kamarunas, E.**, Kuo, C., Henn, M., O'Donoghue, C. (2020) Dysphonia Outperforms Voice Change as a Clinical Predictor of Dysphagia. Poster presentation at the Dysphagia Research Society in San Juan, Puerto Rico. (Online presentation)
- Kamarunas, E.**, Szykiewicz, S., Griffin, L., Henn, M., Drulia, T. (2020) Cortical activation changes driven by mental practice of motor imagery in a swallowing-related task. Oral presentation at the Dysphagia Research Society in San Juan, Puerto Rico. (Online presentation)
- Phaup, K., Dudding, C., **Kamarunas, E.**, Barnes, J. (2019) Academic and Models of Clinical Education. Oral presentation at The American Speech-Language-Hearing Association meeting in San Diego, CA
- Szykiewicz, S., **Kamarunas, E.**, Drulia, T., Nobriga, C., Griffin, L., O'Donoghue, C. (2019) Enhancing effectiveness of active tongue strengthening exercise using mental practice. Oral presentation at the Dysphagia Research Society in San Diego, CA.
- Griffin, L., **Kamarunas, E.**, Henn, M., Schwenger, L., McCann, E., O'Donoghue, C. (2018) Establishing effective amplitude criterion for transcranial direct current stimulation (tDCS) using functional near-infrared spectroscopy (fNIRS). Poster presentation at The American Speech-Language-Hearing Association meeting in Boston, MA.
- Wong, S.M., & **Kamarunas, E.** (2018) Cortical adaptation to changing need for airway protection during swallowing. Poster presentation at the Dysphagia Research Society in Baltimore, MD.
- Kamarunas, E.**, Wong, S.M, Griffin, L., Ludlow, C. (2017) Home Use of Vibratory Stimulation for Retraining in Patients With Chronic Dysphagia. Oral presentation at The American Speech-Language-Hearing Association meeting at Los Angeles, CA.
- Drulia, T., **Kamarunas, E.**, Ludlow, C. (2017) Effects of lung volume on swallowing in chronic obstructive pulmonary disease. Accepted for presentation at the Dysphagia Research Society in Portland, OR.
- Kamarunas, E.**, Rinehart, R. (2017) The effect of biofeedback and exercise target on cortical hemodynamic response. Accepted for presentation at the Dysphagia Research Society in Portland, OR.
- Barone, N., **Kamarunas, E.**, Ludlow, C. (2016) Changes in cortical control for singing onset with increases in task difficulty. Accepted for presentation at the annual Functional Near Infrared Spectroscopy conference in Paris, France.
- Barone, N., Ryoo, J., **Kamarunas, E.** (2016) How we determine baseline measures and its impact on results: A reflective discussion. Accepted for presentation at the annual Functional Near Infrared Spectroscopy conference in Paris, France.
- Mulheren, R., **Kamarunas, E.**, Ludlow, C. (2016) The effect of taste on swallowing elicitation and cortical activity using functional near-infrared spectroscopy. Oral presentation at the Dysphagia Research Society at Tuscon, AZ.
- Kamarunas, E.**, Mulheren, R., Ludlow, C. (2015) Timing of the hemodynamic response for spontaneous swallowing: A functional near infrared spectroscopy study. Oral presentation at The American Speech-Language-Hearing Association meeting at Denver, CO.
- Kamarunas, E.**, Mennemeier, M., Guidry, T., McCullough, G. (2013) Oral perception of liquid volume changes with age. Poster presented at the Dysphagia Research Society at Seattle, WA.

**Kamarunas, E.**, McCullough, G., Taylor, S., Munn, T., Mennemeier, M. (2012) Effects of topical nasal anesthesia on flexible endoscopic examination of swallowing with sensory testing (FEESST) on healthy participants; Preliminary results. Poster presented at the Dysphagia Research Society at Toronto, CA.

**Kamarunas, E.**, Smith, R., McCullough, G., Munn, T., Chilcote, M.E., Mennemeier, M. (2010) Effects of manipulated arousal on swallowing and sensory perceptions in healthy participants. Poster presented at the Dysphagia Research Society at San Antonio, TX.

## External Grant Applications

**2022** **ASHFoundation**, “Predictive Value of Oral Sensory Perception on Dysphagia”, Role: PI, Budget: \$25,000, Length: 2 years, Status: Funded.

**2020** **Encompass Health**, “**Determining an optimal delivery method for tongue strengthening: Building a framework for clinical practice**”, Role: Co-investigator, Budget: \$25,120, Length: 1 Year, Status: Funded.

## Internal Grants

**2023** CHBS Teaching and Research grant, \$5000

**2023** Faculty Senate grant, \$4000

**2022** JMU Minigrant recipient, \$1000

**2021** Faculty Senate grant, \$2200

**2019** 4-VA Research grant, \$5000

**2019** Teaching and Research grant, \$5000

**2018** JMU Minigrant recipient, \$960

**2018** 4-VA Research grant, \$5000

**2018** Faculty Senate grant recipient, \$5000

**2017** JMU Provost Research grant, \$5000

**2017** JMU Minigrant recipient, \$660

**2016** JMU Minigrant recipient, \$990

**2015** JMU Minigrant recipient, \$610

## **CERTIFICATION**

- Lee Silverman Voice Treatment Certification
- McNeill Dysphagia Therapy Program Certification

## **SERVICE**

### **Reviewer for:**

- **The Informed SLP**
- **Gerontology**
- **Annals of Clinical and Translational Neurology**
- **American Journal of Speech-Language Pathology**
- **Frontiers**
- **Clinical Otolaryngology**
- **Scientific Reports**
- **Neurogastroenterology and Motility**
- **Dysphagia**

## **TEACHING EXPERIENCE**

### **Course Instructor 2016-present**

CSD 805, Methods of Measurement

Doctoral course

James Madison University

### **Course Instructor 2016**

CSD 209, Acoustics

Undergraduate course

James Madison University

### **Course Instructor 2015-present**

CSD 656, Voice Disorders

Master's level course

James Madison University

**Course Instructor 2014-present**

CSD 544, Adult Dysphagia

Master's level course

James Madison University

**CLINICAL EXPERIENCE**

**Speech-Language Pathologist 2013-Present**

Voice and Swallowing Service, RMH Healthcare, Harrisonburg, VA

Evaluate and treat adult voice, swallowing, and speech disorders in an outpatient setting.

**Clinical Fellow 2007-2008**

Delta Rehab, Cabot, AR

Evaluate and treat adult swallowing, speech, language, and cognitive disorders.

**Student Clinician 2006-2007**

St. Vincent Hospital, Little Rock, AR

Acute care evaluation and treatment of adult speech, language, and swallowing disorders.