

Curriculum Vita

Steven M. Lulich, PhD

Associate Professor, Department of Speech, Language & Hearing Sciences
Adjunct Associate Professor, Department of Linguistics
Program in Cognitive Science
Imaging Research Facility MRI Faculty

Indiana University, Bloomington

Fellow of the Acoustical Society of America
Associate Editor, Journal of the Acoustical Society of America

Last Updated: July 23, 2025

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Health Sciences Building
2631 East Discovery Parkway
Bloomington, IN 47408

Education

Post-Doctoral Research Fellow, Harvard School of Public Health, 2006-2008
Molecular and Integrative Physiological Sciences, Jeffrey Fredberg lab

Ph.D. Speech and Hearing Bioscience and Technology, MIT, 2006
Dissertation title: The role of lower airway resonances in defining vowel feature contrasts
Doctoral advisor: Kenneth N. Stevens, Sc.D.

A.B. Linguistics, Dartmouth College, 2002 (cum laude with high honors)
Honors thesis title: The phonetics and phonology of [v] in Contemporary Standard Russian.
Honors thesis advisor: Ioana Chitoran, Ph.D.
Exchange Student, Institute for Natural Language Processing, University of Stuttgart, 2000/2001

Employment

Associate Professor, Indiana University, Bloomington, **2020-present**
PhD Coordinator, 2021-2023.
Department of Speech, Language & Hearing Sciences
Adjunct Associate Professor, Indiana University, Bloomington, **2020-present**
Department of Linguistics

Assistant Professor, Indiana University, Bloomington, 2013-2020
Department of Speech and Hearing Sciences
Adjunct Assistant Professor, Indiana University, Bloomington, 2018-2020
Department of Linguistics
Visiting Research Scientist, Indiana University, Bloomington, 2010-2013
Department of Speech and Hearing Sciences
Visiting Assistant Professor, Indiana University, Bloomington, Fall, 2012
Department of Linguistics
Adjunct Lecturer, Indiana University, Bloomington, Spring, 2012
Department of Speech and Hearing Sciences
Research Scientist, Washington University in St Louis, 2009-2012
Department of Psychology
Lecturer, MIT, 2008-2009
Harvard-MIT Division of Health Sciences & Technology
Research Affiliate, MIT, 2006-2010
Speech Communication Group, Research Laboratory of Electronics

RESEARCH

Awarded Grant Proposals

1. NSERC (Natural Sciences and Engineering Research Council of Canada) Alliance Grant (ALLRP) CAD \$24,711.00 July 29, 2024 – July 28, 2025 University of Alberta. “Towards an understanding of the role of the brain stem in speech production: an MRI approach”. Role: International Collaborator (Jacqueline Cummine, PI).
2. NSERC (Natural Sciences and Engineering Research Council of Canada) Alliance International Catalyst Grant (ALLRP) CAD \$25,000.00 June 6, 2023 – June 5, 2024 Ecole de Technologie Superieure. “Palate shape analysis from 3D ultrasound images of the vocal tract”. Role: International Collaborator (Catherine Laporte, PI).
3. NSF Grant IIS-2006818 \$270,000.00 October 1, 2020-September 30, 2025 Indiana University. “Collaborative Research: RI: Small: From ultrasound and MRI to articulatory and acoustic models of child speech development”. Role: PI.
4. Indiana University Research Equipment Fund \$11,220.00 October, 2018-March, 2019 “Speech Research Using Portable Ultrasound System”. Role: Co-PI (Malgorzata Cavar, PI).
5. NSF Grant IIS-1551131 \$160,000.00 September 1, 2015-February 28, 2018 Indiana University. “RI: EAGER: Collaborative Research: Models of Child Speech”. Role: PI.
6. NSF Grant IIS-0905250 \$520,791.00 September 1, 2009-August 31, 2014 Washington University in Saint Louis “RI: Medium: Collaborative Research: The Effect of Subglottal Resonances on Machine and Human Speaker Normalization”. Role: Co-PI (Mitch Sommers, PI).

Publications

Peer-Reviewed Journal Articles

†Student

1. **Lulich, S. M.** (2025). [Subglottal resonances in older adults](#). *Beszédtudomány – Speech Science*, 5(1):12-36.
2. Palo, P., **Lulich, S. M.**, Aalto, D. (2025) [Magnitude of ultrasound probe misalignment measures in controlled conditions – a case study](#). *Beszédtudomány – Speech Science*, 5(1):74-89.
3. Krekeler, B., Donetha Loy, R., †Shaheen, N., **Lulich, S. M.**, †Sheridan, P., †Pena Chavez, R. E., Connor, N. P., Rogus-Pulia, N. (2025) [Establishing a method for 3D/4D ultrasound contouring of tongue surface during swallowing](#). *Ultrasound in Medicine & Biology*, 51(8):1182-1188.
4. Patel, R. R., **Lulich, S. M.**, & †Francisco, P. (2023). [Laryngeal, respiratory, and acoustic characteristics of vocal *trillo* with simultaneous high-speed videoendoscopy, inductive plethysmography, and acoustic recordings](#). *Journal of Voice*.
5. †Diekhoff, M. & **Lulich, S. M.** (2022). [Conceptualizations of the articulation of rhotic sounds in American English, and the role of clinical experience in their formation](#). *Perspectives of the ASHA Special Interest Groups*, 7:1256-1274.
6. **Lulich, S. M.** & Patel, R. R. (2021). [Semi-occluded vocal tract exercises in healthy young adults: articulatory, acoustic, and aerodynamic measurements during phonation at threshold](#). *Journal of the Acoustical Society of America*, 149(5):3213-3227.
7. Cavar, M. E., & **Lulich, S. M.** (2021). [Variation in the articulation of Russian stressed vowels and the mechanics of palatalization in consonants](#). *Phonological Data and Analysis*, 3(3), 1-44.
8. Cavar, M. E., Rudman, E., & **Lulich, S. M.** (2020). [Palatalization in coronal consonants of Polish: a three-/four-dimensional ultrasound study](#). *Journal of the Acoustical Society of America*, 148, EL447-EL452.
9. Cavar, M. E., & **Lulich, S. M.** (2020). [Allophonic variation in the Polish vowel /i/: Results of a 3D ultrasound study and their phonological implications](#). *Journal of Slavic Linguistics*, 28(1), 1-21.
10. †Karthik, E. M. V. N., †Karimi, E., **Lulich, S. M.**, & Laporte, C. (2020). [Automatic tongue surface extraction from 3D ultrasound vocal tract images](#). *Journal of the Acoustical Society of America*, 147, 1623-1633.
11. †Hwang, Y., **Lulich, S. M.**, & de Jong, K. (2019). [Articulatory and acoustic characteristics of the Korean and English word-final laterals produced by Korean female learners of American English](#). *Journal of the Acoustical Society of America*, 146, EL444-EL450.
12. **Lulich, S. M.**, & Cavar, M. E. (2019). [Phonetics of Polish ‘soft’-‘hard’ vowel allophony](#). *Journal of the Acoustical Society of America*, 146, 2263-2278.
13. **Lulich, S. M.**, & Pearson, W. G., Jr. (2019). [3D/4D ultrasound technology in speech research](#). *Perspectives of the ASHA Special Interest Groups*, 4, 733-747.
14. Patel, R. R., **Lulich, S. M.**, & †Verdi, A. (2019). [Vocal tract shape and acoustic adjustments of children during phonation into narrow flow-resistant tubes](#). *Journal of the Acoustical Society of America*, 146, 352-368.

15. †Charles, S., & **Lulich, S.M.** (2019). [Articulatory-acoustic relations in the production of coronal and palatal lateral sounds in Brazilian Portuguese](#). *Journal of the Acoustical Society of America*, 145, 3269-3288.
16. †Hwang, Y., †Charles, S., & **Lulich, S. M.** (2019). [Articulatory characteristics and variation of Korean laterals](#). *Phonetics and Speech Sciences*, 11, 19-27.
17. †Yeung, G., **Lulich, S. M.**, †Guo, J., Sommers, M. S., & Alwan, A. (2018). [Subglottal resonances of American English speaking children](#). *Journal of the Acoustical Society of America*, 144, 3437-3449.
18. †Charles, S. & **Lulich, S. M.** (2018). [Case study of Brazilian Portuguese laterals using a novel articulatory-acoustic methodology with 3D/4D ultrasound](#). *Speech Communication*, 103, 37-48.
19. **Lulich, S. M.**, Berkson, K. H., & de Jong, K. (2018). [Acquiring and visualizing 3D/4D ultrasound recordings of tongue motion](#). *Journal of Phonetics*, 71, 410-424.
20. **Lulich, S. M.**, †Charles, S., & Lulich, B. (2017). [The relation between tongue shape and pitch in clarinet playing using ultrasound measurements](#). *Journal of the Acoustical Society of America*, 141, 1759-1768.
21. **Lulich, S. M.** & †Arsikere, H. (2015). [Tracheo-bronchial soft tissue and cartilage resonances in the subglottal acoustic input impedance](#). *Journal of the Acoustical Society of America*, 137, 3436-3446.
22. †Morton, J. R., Sommers, M. S., & **Lulich, S. M.** (2015). [The effect of exposure to a single vowel on talker normalization for vowels](#). *Journal of the Acoustical Society of America*, 137, 1443-1451.
23. †Arsikere, H., **Lulich, S. M.**, & Alwan, A. (2014). [Estimating Speaker Height and Subglottal Resonances Using MFCCs and GMMs](#). *IEEE Signal Processing Letters*, 21, 159-162.
24. †Arsikere, H., †Leung, G. K.-F. , **Lulich, S. M.**, & Alwan, A. (2013). [Automatic estimation of the first three subglottal resonances from adults' speech signals with application to speaker height estimation](#). *Speech Communication*, 55, 51-70.
25. **Lulich, S. M.**, †Morton, J. R., Sommers, M. S., †Arsikere, A., †Leung, G. K.-F., & Alwan, A. (2012). [Subglottal resonances of adult male and female native speakers of American English](#). *Journal of the Acoustical Society of America*, 132, 2592-2602.
26. **Lulich, S. M.**, Alwan, A., †Arsikere, H., †Morton, J. R., & Sommers, M. S. (2011). [Resonances and wave propagation velocity in the subglottal airways](#). *Journal of the Acoustical Society of America*, 130, 2108-2115.
27. †Arsikere, H., **Lulich, S. M.**, & Alwan, A. (2011). [Automatic estimation of the first subglottal resonance](#). *Journal of the Acoustical Society of America*, 129, EL197-EL203.
28. **Lulich, S. M.** (2010). [Subglottal resonances and distinctive features](#). *Journal of Phonetics* 38, 20-32.
29. †Wang, S., **Lulich, S. M.**, & Alwan, A. (2009). [Automatic detection of the second subglottal resonance and its application to speaker normalization](#). *Journal of the Acoustical Society of America*, 126, 3268-3277.
30. **Lulich, S. M.**, Bachrach, A., & Malyska, N. (2007). [A role for the second subglottal resonance in lexical access](#). *Journal of the Acoustical Society of America*, 122, 2320-2327.
31. **Lulich, S. M.** (2004). [Russian \[v\]: An acoustic study](#). *Folia Linguistica Europea*, 38, 63-85.

Peer-Reviewed Conference Proceedings

†Student

1. †Smith, C., Cheng, H., Palo, P., Aalto, D., **Lulich, S. M.** (accepted). Exploratory Analysis of Brainstem fMRI Data During Sustained Phonation. *Interspeech*.
2. †Shetty, V. M., †Zheng, J., **Lulich, S. M.**, & Alwan, A. (2025). Enhancing age-related robustness in children speaker verification. *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*.
3. †Shetty, V. M., **Lulich, S. M.**, & Alwan, A. (2023). [Developmental articulatory and acoustic features for six to ten year old children](#). *Proceedings of Interspeech*, 4598-4602.
4. **Lulich, S. M.** & Patel, R. R. (2021). [Accelerometer-based measurements of voice quality in children during semi-occluded vocal tract exercise with a narrow straw in air](#). *Proceedings of Interspeech*, 1404-1408.
5. †Yeung, G., †Afshan, A., †Ozgun, K. E., †Kaewtip, K., **Lulich, S. M.**, & Alwan, A. (2017). [Predicting clinical evaluations of children's speech with limited data using exemplar word template references](#). *7th ISCA Workshop on Speech and Language Technology in Education (SLaTE)*, 10, 161-166.
1. Berkson, K. H., de Jong, K., & **Lulich, S. M.** (2017). [Three Dimensional Ultrasound Imaging of Pre- and Post-Vocalic Liquid Consonants in American English: Preliminary Observations](#). *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 5080-5084.
2. †Csapó, T. G. & **Lulich, S. M.** (2015). [Error analysis of extracted tongue contours from 2D ultrasound images](#). *Proceedings of Interspeech*, 2157-2161.
3. †Guo, J., †Pature, R., †Yeung, G., **Lulich, S. M.**, †Arsikere, H., & Alwan, A. (2015). [Age-dependent height estimation and speaker normalization for children's speech using the first three subglottal resonances](#). *Proceedings of Interspeech*, 1665-1669.
4. †Guo, J., †Liu, A., †Arsikere, H., Alwan, A., & **Lulich, S. M.** (2014). [The relationship between the second subglottal resonance and vowel class, standing height, trunk length, and F0 variation for Mandarin speakers](#). *Proceedings of Interspeech*, 930-934.
5. **Lulich, S. M.** (2013). [Estimation of lumped vocal fold mechanical properties from non-invasive vowel and subglottal acoustics recordings](#). *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 8041-8045.
6. †Arsikere, H., **Lulich, S. M.**, & Alwan, A. (2013). [Non-linear frequency warping for VTLN using subglottal resonances and the third formant](#). *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 7922-7926.
7. †Arsikere, H., †Leung, G. K.-F., **Lulich, S. M.**, & Alwan, A. (2012). [Automatic estimation of the first two subglottal resonances in children's speech with application to speaker normalization in limited-data conditions](#). *Proceedings of Interspeech*, 1267-1270.
8. †Arsikere, H., †Leung, G. K.-F., **Lulich, S. M.**, & Alwan, A. (2012). [Automatic height estimation using the second subglottal resonance](#). *Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 3989-3992.
9. †Grácz, T. E., **Lulich, S. M.**, †Csapó, T. G., & †Beke, A. (2011). [Context and speaker dependency in the relation of vowel formants and subglottal resonances - Evidence from Hungarian](#). *Proceedings of Interspeech*, 1901-1904.

10. **Lulich, S. M.**, †Arsikere, H., †Morton, J. R., †Leung, G. K.-F., Alwan, A., & Sommers, M. S. (2011). [Analysis and automatic estimation of children's subglottal resonances](#). *Proceedings of Interspeech*, 2817-2820.
11. †Arsikere, H., **Lulich, S. M.**, & Alwan, A. (2011). [Automatic estimation of the second subglottal resonance from natural speech](#). *Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 4616-4619.
12. †Csapó, T. G., Bárkányi, Z., †Grácz, T. E., Böhm, T., & **Lulich, S. M.** (2009). [Relation of formants and subglottal resonances in Hungarian vowels](#). *Proceedings of Interspeech*, 484-487.
13. †Wang, S., **Lulich, S. M.**, & Alwan, A. (2008). [A reliable technique for detecting the second subglottal resonance and its use in cross-language speaker adaptation](#). *Proceedings of Interspeech*, 1717-1720.
14. †Madsack, A., **Lulich, S. M.**, Wokurek, W., & Dogil, G. (2008). [Subglottal resonances and vowel formant variability: A case study of High German monophthongs and Swabian diphthongs](#). *Proceedings of LabPhon, 11*, 91-92.
15. †Wang, S., Alwan, A., & **Lulich, S. M.** (2008). [Speaker normalization based on subglottal resonances](#). *Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 4277-4280.
16. **Lulich, S. M.** & Thompson, P. (2002). [Lexicon development and the infosphere](#). *Proceedings of Language Resources Evaluation Conference (LREC) Question Answering workshop*, 35-38.

Editor-Reviewed Conference Proceedings

†Student

1. Palo, P. & **Lulich, S. M.** (2021). [An ultrasound study of the effect of rest position on timing of pre-acoustic speech movements](#). *Proceedings of Meetings on Acoustics*, 45, 060011.
2. **Lulich, S. M.** & †Charles, S. D. (2020). [Development of formant frequency distributions in American English-speaking elementary school-aged children: a longitudinal study](#). *Proceedings of Meetings on Acoustics*, 42, 060016.
3. †Alfaifi, A. H., Cavar, M. E., & **Lulich, S. M.** (2020). [Tongue root position in Hijazi Arabic voiceless emphatic and non-emphatic coronal consonants](#). *Proceedings of Meetings on Acoustics*, 42, 060004.
4. †Charles, S. D., & **Lulich, S. M.** (2019). [An ultrasound study of American English laterals produced by children](#). *Proceedings of Meetings on Acoustics*, 36, 060006.
5. **Lulich, S. M.**, Cavar, M. E., & †Nelson, M. (2017). [Three-dimensional ultrasound images of Polish high front vowels](#). *Proceedings of Meetings on Acoustics*, 173EAA 30, 060006.
6. Cavar, M. E., **Lulich, S. M.**, & †Nelson, M. (2017). [Allophonic variation in Polish vowels in the context of prepalatal consonants](#). *Proceedings of Meetings on Acoustics*, 173EAA 30, 060007.
7. **Lulich, S. M.**, Zaňartu, M., Mehta, D. D., & Hillman, R. E. (2009). [Source-filter interaction in the opposite direction: Subglottal coupling and the influence of vocal fold mechanics on vowel spectra during the closed phase](#). *Proceedings of Meetings on Acoustics*, 6, 060007.

8. **Lulich, S. M.** & Chen, N. F. (2009). [Automatic classification of consonant-vowel transitions based on subglottal resonances and second formant frequencies](#). *Proceedings of Meetings on Acoustics*, 6, 060005.
9. **Lulich, S. M.** (2008). [On the relation between locus equations and subglottal resonances](#). *Proceedings of Meetings on Acoustics*, 5, 060003.

Peer-Reviewed Book Chapters

†Student

1. †Mokh, N. A., **Lulich, S. M.**, †Alfaifi, A., †Robinson, S., †Charles, S., & de Jong, K. (2020). A study of the place of articulation of the Arabic voiceless dorsal fricative. In Van Gelderen, E. (Ed.), *Perspectives on Arabic Linguistics XXXII* (pp. 55-67). John Benjamins.
2. **Lulich, S. M.** (2019). Voice Production: Physics. In Damico, J. S., & Ball, M. J. (Eds.), *The SAGE Encyclopedia of Human Communication Sciences and Disorders* (pp. 2094-2099). SAGE Publishing.
3. **Lulich, S. M.** (2019). Speech Production, Theories of. In Damico, J. S., & Ball, M. J. (Eds.), *The SAGE Encyclopedia of Human Communication Sciences and Disorders* (pp. 1783-1787). SAGE Publishing.
4. **Lulich, S. M.** & Whaley, L. J. (2012). An acoustic phonetic study of Oroqen vowels. In (Whaley, L. J. & Malchukov, A. (Eds.), *Recent Advances in Tungusic Linguistics* (pp. 59-78). Harrassowitz.
5. Dogil, G., **Lulich, S. M.**, †Madsack, A., & Wokurek, W. (2011). Crossing the quantal boundaries of features: Subglottal resonances and Swabian diphthongs. In Goldsmith, J. A., Hume, E., & Wetzels, L. (Eds.), *Tones and Features: Phonetic and Phonological Perspectives* (pp. 137-148). de Gruyter.

Other Publications

1. **Lulich, S. M.**, Alwan, A., Sommers, M. S., & †Yeung, G. (2022). [The Child Subglottal Resonances Database](#). *Linguistic Data Consortium*: University of Pennsylvania.
2. Alwan, A., **Lulich, S. M.**, & Sommers, M. S. (2015). [The Subglottal Resonances Database](#). *Linguistic Data Consortium*: University of Pennsylvania.
3. **Lulich, S. M.** (2012). Derivation and acoustic effects of an area function for the laryngeal subglottis. *The Phonetician*, 105/106, 25-36.
4. †Csapó, T. G., †Grácz, T. E., Bárkányi, Z., †Beke, A., & **Lulich, S. M.** (2009). Patterns of Hungarian vowel production and perception with regard to subglottal resonances. *The Phonetician*, 99/100, 7-28.

Honors and Awards

Fellow of the Acoustical Society of America

Elected in Spring 2022

Indiana University Advanced Cyberinfrastructure Fellow

Selected to participate the ACI Fellows program (2024/2025)

Indiana University Institute for Advanced Study

- Selected to participate in the Recently Tenured Working Group (2021/2022)

Indiana University Trustees Teaching Award

- 2019

Best Student Paper

- Acoustical Society of America
 - Bachrach, A., **Lulich, S. M.**, Malyska, N. (2005). A role for tracheal resonances in speech perception.

TEACHING

Courses Taught

- S702 Instrumentation for Speech, Language, and Hearing Sciences** (PhD course)
Indiana University, Bloomington, Fall 2020, Spring 2019, 2023.
Enrollment ~10-15.
- S683 Research Forum** (PhD course)
Indiana University, Bloomington, Fall 2021, 2022, Spring 2022, 2023.
Enrollment variable.
- S682 2nd Year Project** (PhD course)
Indiana University, Bloomington, Fall 2021, 2022, Spring 2022, 2023.
Enrollment variable.
- S681 1st Year Project** (PhD course)
Indiana University, Bloomington, Fall 2021, 2022, Spring 2022, 2023.
Enrollment variable.
- S580 Critical Thinking about Research in Communication Sciences and Disorders**
(MA course)
Indiana University, Bloomington, Fall 2013, 2014.
Enrollment ~40
- S555 Motor Speech Disorders** (MA course)
Indiana University, Bloomington, Fall 2021.
Enrollment ~30-40
- S522 Signal and Image Processing for Speech, Language and Hearing Research** (PhD course)
Indiana University, Bloomington, Fall 2023.
Enrollment ~ 10
- S515 Reading Research in Audiology** (AuD course)
Indiana University, Bloomington, Spring 2012, 2015.
Enrollment ~30
- S425 Speech Imaging** (undergraduate senior seminar)
Indiana University, Bloomington, Fall 2017, 2018, Spring 2017.
Enrollment ~10-25.
- S425 Speech in Sickness and Health** (undergraduate senior seminar)
Indiana University, Bloomington, Spring 2022.
Enrollment ~10-30.
- S423 Speech in Sickness and Health** (undergraduate senior seminar)

- Indiana University, Bloomington, Spring 2024, 2025.
Enrollment ~10-30.
- S350 Speech Science** (undergraduate course)
Indiana University, Bloomington, Fall 2017, 2018, 2019, 2021, 2022, 2024 Spring
2018, 2020, 2022, 2024, 2025.
Enrollment ~40-60
- S311 Introduction to Research Methods** (undergraduate course)
Indiana University, Bloomington, Fall 2016, 2019, Spring 2018, 2019, 2020.
Enrollment ~25-45
- S302 Acoustics for Speech and Hearing Science** (undergraduate course)
Indiana University, Bloomington, Fall 2013, 2014, 2015, 2016, Spring 2014, 2015,
2017.
Enrollment ~50-70
- S201 Speech Anatomy and Physiology** (undergraduate course)
Indiana University, Bloomington, Fall 2020, 2023, 2024
Enrollment ~55-65
- L306 Introduction to Phonetics** (undergraduate course)
Indiana University, Bloomington, Fall 2012.
Enrollment ~35
- L210 Word Crime: Language as Evidence** (undergraduate course)
Indiana University, Bloomington, Fall 2012.
Enrollment ~15
- L700 Signal Processing for Linguistics** (PhD course)
Indiana University, Bloomington, Fall 2012.
Enrollment ~15
- Speech Acoustics** (graduate course; taught by video conference)
Budapest University of Technology and Economics, Spring 2009.
Enrollment ~20
- Speech Communication** (PhD course)
Massachusetts Institute of Technology, Spring 2008.
Enrollment ~ 20

Students and Visiting Researchers

Research Fellows

- | | |
|--|-----------|
| Pertti Palo | 2021-2024 |
| • Post-doctoral fellow, Emil Aaltonen Foundation | |
| Tamás Gábor Csapó | 2014 |
| • Post-doctoral fellow, Fulbright Fellowship Program | |

External PhD Students

- | | |
|--------------------------|-----------|
| Sarah Li | 2022-2024 |
| Biomedical Engineering | |
| University of Cincinnati | |

Supervisor: Suzanne Boyce
 Role: outside F31 mentor and dissertation committee member
 Palli Padmini 2022
 Electronics and Communication Engineering
 Amrita Viswa Vidyapeetham University, Bengaluru, India
 Supervisor: Sriram Devanathan
 Role: outside examiner

External MA Students

Suzon Olory 2022-2024
 Electrical Engineering
 École de Technologie Supérieure
 Supervisor : Catherine Laporte
 Role: outside co-supervisor

PhD Students

Serena Bruneaux (SLHS) in progress
 Role: advisory committee member
Samadhi Pusuba Devayalage (SLHS) in progress
Role: advisory committee chair
Carey Smith (SLHS) in progress
Role: advisory committee chair
 Malachi Henry (SLHS) in progress
 Role: advisory committee member
 Tzu-Pei Tsai (SLHS) in progress
 Role: advisory committee member
Megan Diekhoff (SLHS) in progress
Role: dissertation committee chair
 Rose Rizzi (SLHS) 2023-2025
 Role: advisory committee member
 Yi Liu (SLHS) 2021-2024
 Role: advisory committee member
 Donghyeon Yun (SLHS) 2024
 Role: dissertation committee member
 Ryan Anderson (SLHS) 2024
 Role: dissertation committee member
 Dylan Pearson (SLHS) 2023
 Role: dissertation committee member, minor representative (Cog. Sci.)
 Brandon Merritt (SLHS) 2022
 Role: dissertation committee member
 Zhuohuang “Cole” Zhang (SLHS) 2022
 Role: dissertation committee member
 Abdullah Alfaifi (Linguistics) 2022
 Role: dissertation committee member, minor representative
Sherman Charles (SLHS, Linguistics) 2022
Role: dissertation committee chair

Eileen Brister (SLHS)	2021
Role: dissertation committee member	
Colette Feehan (Linguistics)	2021
Role: dissertation committee member, minor representative	
Chisato Kojima (Second Language Acquisition, Linguistics)	2019
Role: dissertation committee member, minor representative	
Jonathan North Washington (Linguistics, Central Eurasian Studies)	2016
Role: dissertation committee member, minor representative	

Undergraduate Students

Kiannah Streepy	
• Speech, Language & Hearing Sciences Honors Program	2025-present
Olivia Huff	
• Speech, Language & Hearing Sciences Honors Program	2024-2025
Nicole Neuenschwander	
• Speech, Language & Hearing Sciences Honors Program	2022-2023
• Undergraduate Research Grant	
Joy Banda	
• Speech, Language & Hearing Sciences Honors Program	2022-2023
Erica Beckstrom	
• Speech, Language & Hearing Sciences Honors Program	2021-2023
Ryane Hohman	
• Undergraduate Research Grant [co-mentored with Dr. Rita Patel]	2021-2022
Christina Shirley	
• Speech, Language & Hearing Sciences Honors Program	2021-2022
Claire Callistein	
• Speech, Language & Hearing Sciences Honors Program	2021-2022
Rachel Hopf	
• Speech & Hearing Sciences Honors Program	2019-2020
Megan Diekhoff	
• Speech & Hearing Sciences Honors Program	2018-2019
• Chuck Watson Award for Best Honors Thesis	2019
• Undergraduate Research Grant	2018
• Robert W. Young Award for Undergraduate Research in Acoustics	2018
Shivani Patel	
• Undergraduate Research Grant [co-mentored with Dr. Rita Patel]	2019
Alessandra Verdi	
• Undergraduate Research Grant [co-mentored with Dr. Rita Patel]	2018
Alyssa Book	
• Speech & Hearing Sciences Honors Program	2016-2017
• Chuck Watson Award for Best Honors Thesis	2017
Alexandra “Andy” Abell-Bertola	
• Speech & Hearing Sciences Honors Program	2014-2015
• McNair Scholar	2014-2015

SERVICE

Society Memberships

Acoustical Society of America (ASA) – Fellow of the Acoustical Society of America
IEEE, Signal Processing Society
International Speech Communication Association (ISCA)
American Speech, Language and Hearing Association (ASHA), SIG 19

Conferences, Special Sessions, Workshops

Acoustical Society of America, General Chair, Fall 2024 Virtual Meeting.
Acoustical Society of America, Virtual Technology Task Force, May, 2020 – 2023. Role:
appointed member, representative from Speech Communication Technical Committee.
UltraFest IX virtual conference in Bloomington, Indiana, October 21-24, 2020. Role: Lead
organizer.
LabPhon16 conference, Tutorial on Ultrasound Evidence in Phonology in Lisbon, Portugal, June
19, 2018. Role: Co-organizer with Doug Whalen and Aude Noiray.
187th Meeting of the Acoustical Society of America (virtual meeting), November 19, 2024.
Session 1pSCb: Speech Communication: Speech Articulation. Role: Chair.
173rd Meeting of the Acoustical Society of America in Boston, Massachusetts, June 27, 2017.
Session 3aSC: Speech Communication: Prosody. Role: Chair.
168th Meeting of the Acoustical Society of America in Indianapolis, Indiana, October 30, 2014.
Session 4aSCa: Speech Communication: Subglottal resonances in speech production and
perception. Role: Co-chair and co-organizer with Abeer Alwan and Mitchell Sommers.

Journal and Conference Reviewer

Associate Editor, Journal of the Acoustical Society of America, June 30, 2025 – present

Ad hoc Reviewer

Biomedical Signal Processing and Control
Clinical Linguistics & Phonetics
Computer Methods in Biomechanics and Biomedical Engineering: Imaging and
Visualization
ICASSP
IEEE Signal Processing Letters
IEEE Transactions on Audio, Speech, and Language Processing
INTERSPEECH
Journal of the Acoustical Society of America
Journal of the Acoustical Society of America – Express Letters
Journal of Communication Disorders
Journal of Experimental Psychology

Journal of Phonetics
 Journal of the Association of Laboratory Phonology
 Journal of Speech Language Hearing Research
 LabPhon
 Lingua
 Linguistic Discovery
 Phonology
 PLOS One
 Transactions of the Philological Society

Ad-Hoc Grant Reviewer

National Science Foundation, BCS-Linguistics
 Austrian Science Fund (FWF)
 National Science Center Poland (NCN)

External Tenure and Promotion Reviewer

Swarthmore College

Invited Conference Presentations

†Student

1. Berkson, K. H., †Lotven, S., †Wamsley, J., †Sung, Z., †Thang, P., †Thawngza, T., de Jong, K., Kuebler, S., **Lulich, S. M.** (2018). [Kuki-Chin languages in Indiana: Investigating typologically rare sounds in a developing community of collaboration.](#) *Journal of the Acoustical Society of America*, 144:1937.
2. Berkson, K. H., de Jong, K., **Lulich, S. M.**, Cavar, M. (2018). [Building a multilingual ultrasound corpus.](#) *Journal of the Acoustical Society of America*, 144:1717.
3. **Lulich, S. M.** (2017). [Multimodal investigation of speech production featuring real-time three-dimensional ultrasound.](#) *Journal of the Acoustical Society of America*, 141:3646.
4. **Lulich, S. M.** (2016). 3D/4D Ultrasound Imaging of Swallowing and Speech Production. [4th International Workshop on Biomechanical and Parametric Modeling of Human Anatomy \(PMHA\).](#)
5. **Lulich, S. M.** (2016). [Patterns of lingual articulation: A real-time three-dimensional ultrasound + palate study.](#) *Journal of the Acoustical Society of America*, 2192.

Contributed Conference Presentations

†Student

1. †Smith, C., †Pusuba Devayalage, S., Arrends, A., †Bruneaux, S., †Sivarkar, M. R., Spencer, C., **Lulich, S. M.** (submitted) Identification of cranial nerves in structural MRI of head and neck. *Methods and Techniques in Phonetics Sciences*. October, 2025.
2. †Pusuba Devayalage, S., †Smith, C., †Sivarkar, M. R., **Lulich, S. M.** (submitted) Evaluating the genioglossus tendon as an anatomical landmark for ultrasound-based tongue measurements. *Methods and Techniques in Phonetics Sciences*. October, 2025.

3. †Sivarkar, M. R., Laporte, C., **Lulich, S. M.** (submitted) Methods in conducting a shape analysis of 3-D palate impressions. *Methods and Techniques in Phonetics Sciences*. October, 2025.
4. Palo, P., **Lulich, S. M.**, Aalto, D. (2025) Exploring pixel difference noise floor in tongue ultrasound data. *Journal of the Acoustical Society of America*. April, 2025.
5. Cheng, H., †Brink, S., †Smith, C., Aalto, D., Lulich, S. M. (2025) Brainstem activation from sustained vowel phonation. *International Society for Magnetic Resonance in Medicine (ISMRM)*. May, 2025.
6. †Smith, C. J., **Lulich, S. M.** (2024) Ultrasound measurements of lingual deformation and oral transit time. *UltraFest XI*. June, 2024.
7. Palo, P., **Lulich, S. M.** (2024) Toward assessing stability and sensitivity of tongue contour metrics. *UltraFest XI*. June, 2024.
8. **Lulich, S. M.** (2024) Subglottal resonances in healthy older adults. *Journal of the Acoustical Society of America*. May, 2024.
9. Palo, P., **Lulich, S. M.** (2024) Some effects of frame rate on automatic articulatory gesture identification from ultrasound video recordings of the tongue. International Seminar on Speech Production. May, 2024.
10. †Shaheen, N., Krekeler, B., Robison, R., **Lulich, S. M.**, Connor, N., Rogus-Pulia, N. (2024) Establishing 4-dimensional ultrasound for contouring tongue surface during swallowing. *Dysphagia Research Society*. March, 2024.
11. Cavar, M. E., & **Lulich, S. M.** (2023) [What can harmonize and how consonantal harmonies are like vowel harmonies](#). *Symposium on Vowel Harmony*. Budapest, November, 2023.
12. Palo, P., **Lulich, S. M.** (2023) [Improving signal-to-noise ratio in ultrasound video pixel difference](#). *Journal of the Acoustical Society of America*. May, 2023.
13. †Diekhoff, M., **Lulich, S. M.** (2023) [Breathing patterns of conversation partners](#). *Journal of the Acoustical Society of America*. May, 2023.
14. **Lulich, S. M.** (2022) [Growth of the hard palate between the ages of 6 and 10 years: a longitudinal study](#). *Journal of the Acoustical Society of America*. December, 2022.
15. †Diekhoff, M., **Lulich, S. M.** (2022) [Anatomical measures of the vocal tract in children ages 5 and 6](#). *Journal of the Acoustical Society of America*. December, 2022.
16. **Lulich, S. M.**, Patel, R. R. (2022) [Evaluation of automatically generated tongue surfaces from three-dimensional/four-dimensional ultrasound recordings of sustained vowels](#). *Journal of the Acoustical Society of America*. December, 2022.
17. †Shetty, V., **Lulich, S. M.**, Palo, P., Alwan, A. (2022) [Development of vowel acoustics and subglottal resonances in American English-speaking children: A longitudinal study](#). *Journal of the Acoustical Society of America*. December, 2022.
18. Palo, P., **Lulich, S. M.** (2022) [Extending the pixel difference metric from 2D to 3D/4D ultrasound](#). *Journal of the Acoustical Society of America*. December, 2022.
19. †Diekhoff, M., **Lulich, S. M.** (2022) Effect of Instruction on Children's Representation of a Target Tongue Shape for Rhotic Articulation. *ASHA Convention*. November, 2022.
20. **Lulich, S. M.**, †Diekhoff, M., Patel, R. R. (2021) [Tongue position variability in sustained vowels produced by healthy children and young adults with and without a semi-occluded vocal tract: a pilot study](#). *Journal of the Acoustical Society of America*. December, 2021.

21. Palo, P., **Lulich, S. M.** (2021) [An ultrasound study of rest position and pre-acoustic articulation in adults and children](#). *Journal of the Acoustical Society of America*. December, 2021.
22. Palo, P., **Lulich, S. M.** (2021) [Characterizing end of utterance movements](#). *Acoustics Week in Canada*. October, 2021.
23. Cavar, M. E., **Lulich, S. M.**, †Alfaifi, A. H. (2021) [Variation as a measure of under-specification and category: The case of palatalization and emphasis](#). *Manchester Phonology Meeting*. May, 2021.
24. †Alfaifi, A., Cavar, M. E., **Lulich, S. M.**, (2020). [Tongue root position in Hijazi Arabic voiceless emphatic and non-emphatic coronal consonants](#). *Journal of the Acoustical Society of America*. December, 2020.
25. †Charles, S., **Lulich, S. M.** (2020). [Development of formant frequency distributions in American English-speaking elementary school-aged children: a longitudinal study](#). *Journal of the Acoustical Society of America*. December, 2020.
26. **Lulich, S. M.** (2020). Ultrasound visualization and analysis using WASL. [UltraFest IX](#). October, 2020.
27. **Lulich, S. M.**, Karthik, E. M. V. N., Laporte, C. (2020). Automatic tongue surface extraction from 3D ultrasound using 3D SLURP. [UltraFest IX](#). October, 2020.
28. Cavar, M., **Lulich, S. M.** (2019). [Phonetics explains phonotactics: the case of velar consonants followed by front vowels in Polish](#). *Approaches to Phonology and Phonetics*.
29. Patel, R. R., **Lulich, S. M.** (2019). [Vocal tract shape and acoustic adjustments of children during phonation with narrow flow-resistant tubes](#). *Advances in Quantitative Laryngology*.
30. Cavar, M., **Lulich, S. M.** (2019). [\(Re-\)Interpreting Place Features in Feature Geometry](#). *Manchester Phonology Meeting*. Manchester: May, 2019.
31. Cavar, M., **Lulich, S. M.** (2019). [The role of the tongue root in palatalization: the softness distinction in Russian re-interpreted](#). *Old World Conference in Phonology*. Verona: January, 2019.
32. †Feehan, C., **Lulich, S. M.** (2019). [Voice actors imitating child speech: A study of using 3D ultrasound](#). *Journal of the Acoustical Society of America*, 145:1930.
33. de Jong, K., Berkson, K. H., **Lulich, S. M.**, †Myers, S., †Bohnert, A. (2019). [The lingual topography of American English laterals in onsets and codas](#). *Journal of the Acoustical Society of America*, 145:1928.
34. †Charles, S., **Lulich, S. M.** (2019). [An ultrasound study of American English laterals produced by first graders](#). *Journal of the Acoustical Society of America*, 145:1795.
35. Cavar, M., **Lulich, S. M.** (2018). [Tongue root advancement in palatalization of Russian and Polish consonants measured with 3D ultrasound](#). *Formal Descriptions of Slavic Languages*. Goettingen: December, 2018.
36. **Lulich, S. M.** (2018). [Registration and fusion of 3D head-neck MRI and 3D/4D tongue ultrasound](#). *Journal of the Acoustical Society of America*, 144:1904.
37. †Diekhoff, M., **Lulich, S. M.** (2018). [Speech-language pathology student-clinicians' self-awareness of tongue position during rhotic sound production in American English](#). *Journal of the Acoustical Society of America*, 144:1856.
38. Cavar, M., **Lulich, S. M.** (2018). [Sub-articulatory interactions in palatalization processes](#). *Journal of the Acoustical Society of America*, 144:1722.

39. Whalen, D. H., Noiray, A., **Lulich, S. M.** (2018). [Tutorial on Ultrasound Evidence in Phonology](#). *LabPhon 16*. Lisbon: June, 2018.
40. Cavar, M., **Lulich, S. M.** (2018). [The position of the tongue root in the articulation of posterior sibilants in Polish](#). *Journal of the Acoustical Society of America*, 143:1967.
41. **Lulich, S. M.**, Cavar, M. (2018). [The role of tongue root advancement in palatalization: Evidence from Polish](#). *Manchester Phonology Meeting*. Manchester: May, 2018.
42. **Lulich, S. M.** (2017). [Acquisition and analysis of 3D/4D ultrasound recordings of speech](#). *UltraFest VIII*. Potsdam: October, 2017, pp. 33-34.
43. Laporte, C., **Lulich, S. M.** (2017). [Towards automated segmentation of the moving tongue surface in 3D ultrasound](#). *UltraFest VIII*. Potsdam: October, 2017, pp. 65-66.
44. **Lulich, S. M.** (2017). [Non-invasive measurement of acoustic coupling between the clarinet bore and its player's vocal tract](#). *Journal of the Acoustical Society of America*, 141:3723.
45. **Lulich, S. M.**, †Nelson, M., De Jong, K., Berkson, K. H. (2017). [Anatomically oriented Principal Components Analysis of three-dimensional tongue surfaces](#). *Journal of the Acoustical Society of America*, 141:3584.
46. †Foley, O., Piper, A. W., **Lulich, S. M.** (2017). [Three-dimensional analysis of liquid sounds produced by first graders](#). *Journal of the Acoustical Society of America*, 141:3747.
47. **Lulich, S. M.**, Cavar, M., †Nelson, M. (2017). [3-D ultrasound images of Polish high front vowels](#). *Journal of the Acoustical Society of America*, 141:3819.
48. Cavar, M., **Lulich, S. M.**, †Nelson, M. (2017). [Allophonic variation of Polish vowels in the context of prepalatal consonants](#). *Journal of the Acoustical Society of America*, 141:3820.
49. †Yeung, G., **Lulich, S. M.**, Toutios, A., Alwan, A., †Afshan, A. (2016). [Analysis of children's high front vowel area function using three-dimensional ultrasound imaging](#). *Journal of the Acoustical Society of America*, 140:3448.
50. **Lulich, S. M.**, †Charles, S., Lulich, B. (2016). [Real-time three-dimensional tongue motion during clarinet performance](#). *Journal of the Acoustical Society of America*, 139:2203.
51. †Foley, O., †McNeil, S., †Schlimm, K., Piper, A. W., **Lulich, S. M.** (2016). [Rhotic articulation by first graders: A real-time three-dimensional ultrasound study](#). *Journal of the Acoustical Society of America*, 139:2219.
52. **Lulich, S. M.**, †Rhodes, B., †Nelson, M., Berkson, K. H., De Jong, K. (2016). [Three-dimensional tongue shapes of /r/ production in American English words](#). *Journal of the Acoustical Society of America*, 139:2222.
53. †Rhodes, B., Berkson, K. H., De Jong, K., **Lulich, S. M.** (2015). [Real-time three-dimensional ultrasound imaging of pre- and post-vocalic liquid consonants in American English](#). *Journal of the Acoustical Society of America*, 137:2268.
54. Alwan, A., **Lulich, S. M.**, †Arsikere, H. (2015). [The role of subglottal resonances in speech processing algorithms](#). *Journal of the Acoustical Society of America*, 137:2327.
55. †Abell, A., **Lulich, S. M.** (2015). [Dental, or retroflex, that is the question: A study of Mina stop consonants](#). *Journal of the Acoustical Society of America*, 137:2382.
56. †Abell, A., **Lulich, S. M.** (2014). [Articulation of sibilant fricatives in Colombian Spanish](#). *Journal of the Acoustical Society of America*, 136:2127.

57. Bent, T., **Lulich, S. M.**, Withnell, R. H., Shofner, W. (2014). [Acoustics-related research in the Department of Speech and Hearing Sciences at Indiana University.](#) *Journal of the Acoustical Society of America*, 136:2199.
58. †Bonadies, M., Withnell, R. H., **Lulich, S. M.** (2014). [Comparison of tidal breathing and reiterant speech breathing using whole body plethysmography.](#) *Journal of the Acoustical Society of America*, 136:2144.
59. †Duvenenko, N., **Lulich, S. M.** (2014). [Relationship between lung volumes and subglottal resonances.](#) *Journal of the Acoustical Society of America*, 136:2260.
60. †Janssen, S., **Lulich, S. M.** (2014). [Palate-related constraints on sibilant production in three dimensions.](#) *Journal of the Acoustical Society of America*, 136:2128.
61. **Lulich, S. M.** (2014). [Combined analysis of real-time three-dimensional tongue ultrasound and digitized three-dimensional palate impressions: Methods and findings.](#) *Journal of the Acoustical Society of America*, 136:2104.
62. **Lulich, S. M.**, †Bonadies, M., Lulich, M. D., Withnell, R. H. (2014). [Ultrasound study of diaphragm motion during tidal breathing and speaking.](#) *Journal of the Acoustical Society of America*, 136:2144.
63. †Pedro, R., †Mazzocco, E., †Csapó, T. G., **Lulich, S. M.** (2014). [Investigation of a tongue-internal coordinate system for two-dimensional ultrasound.](#) *Journal of the Acoustical Society of America*, 136:2128.
64. Sommers, M. S., Alwan, A., **Lulich, S. M.** (2014). [The role of subglottal acoustics in speech production and perception.](#) *Journal of the Acoustical Society of America*, 136:2259.
65. †Talbert, C. M., **Lulich, S. M.** (2014). [Palate shape and the central tongue groove.](#) *Journal of the Acoustical Society of America*, 136:2127.
66. †Tebout, M., **Lulich, S. M.** (2014). [Comparison of palate impressions and palate casts from three-dimensional laser-scanned digital models.](#) *Journal of the Acoustical Society of America*, 136:2128.
67. **Lulich, S. M.** (2013). [Estimation of vocal tract input impedance at the glottis from formant measurements.](#) *Journal of the Acoustical Society of America*, 134:4203.
68. †Morton, J. R., Sommers, M. S., **Lulich, S. M.**, Alwan, A., †Arsikere, H. (2013). [Acoustic features mediating height estimation from human speech.](#) *Journal of the Acoustical Society of America*, 134:4072.
69. †Morton, J. R., **Lulich, S. M.**, Sommers, M. S. (2012). [The effects of prior access to talker information on vowel identification in single- and mixed-talker contexts.](#) *Journal of the Acoustical Society*, 132:2078.
70. †Arsikere, H., †Lee, Y., **Lulich, S. M.**, †Morton, J. R., Sommers, M. S., Alwan, A. (2010). [Relations among subglottal resonances, vowel formants, and speaker height, gender, and native language.](#) *Journal of the Acoustical Society of America*, 128:2288.
71. **Lulich, S. M.**, †Morton, J. R., Sommers, M. S., †Arsikere, H., †Lee, Y., Alwan, A. (2010). [A new speech corpus for studying subglottal acoustics in speech production, perception, and technology.](#) *Journal of the Acoustical Society of America*, 128:2288.
72. **Lulich, S. M.** (2010). [Effects of ambient pressure and gas mixture on a numerical model of subglottal acoustics and vowel spectra.](#) *Journal of the Acoustical Society of America*, 127:2020.
73. **Lulich, S. M.**, Zañartu, M., Mehta, D. D., Hillman, R. E. (2009). [Source-filter interaction in the opposite direction: Subglottal coupling and the influence of vocal fold](#)

- [mechanics on vowel spectra during the closed phase](#). *Journal of the Acoustical Society of America*, 125:2638.
74. Chen, N. F., **Lulich, S. M.** (2009). [Automatic classification of consonant-vowel transitions based on subglottal resonances and second formant frequencies](#). *Journal of the Acoustical Society of America*, 125:2638.
 75. **Lulich, S. M.** (2008). [On the relation between locus equations and subglottal resonances](#). *Journal of the Acoustical Society of America*, 124:2558.
 76. Jung, Y., **Lulich, S. M.**, Stevens, K. N. (2008). [Development of subglottal quantal effects in young children](#). *Journal of the Acoustical Society of America*, 124:2519.
 77. **Lulich, S. M.** (2006). [Modeling the effects of the lower airway on vowel spectra](#). *Journal of the Acoustical Society of America*, 119:3303.
 78. Bachrach, A., **Lulich, S. M.**, Malyska, N. (2005). [A role for tracheal resonances in speech perception](#). *Journal of the Acoustical Society of America*, 117:2572.

Invited Colloquia

1. **Lulich, S. M.** (2024). Embodied phonetics: How our embodied experience affects our speech. *Ecole Technologie Supérieure, University of Quebec, Montreal*. March, 2024.
2. **Lulich, S. M.** (2023). Speech research at the interfaces. *Ecole Technologie Supérieure, University of Quebec, Montreal*. October, 2023.
3. **Lulich, S. M.** (2018). Research from the Speech Production Laboratory. *Indiana University Department of Speech & Hearing Sciences Colloquium*. October, 2018.
4. **Lulich, S. M.** (2018). Beyond articulation: Tongue anatomy and deformation in phonetics and phonology. *Indiana University Department of Linguistics Colloquium*. September, 2018.
5. **Lulich, S. M.** (2017). Introduction to Ultrasound Imaging Research in the Speech Production Laboratory. *Indiana University Linguistics Club Colloquium*. December 8, 2017.
6. Berkson, K. H., **Lulich, S. M.** (2017). 3D/4D Ultrasound Research: New Methods, Challenges, and Insights. *Mississippi University for Women, Department of Speech Pathology*. November, 2017.
7. **Lulich, S. M.** (2016). Real-time three-dimensional ultrasound imaging of the vocal tract during speech and clarinet sound production. Colloquium presented at the *Institute for Natural Language Processing*, University of Stuttgart, Germany. July, 2016.
8. **Lulich, S. M.** (2014). Introducing the Speech Production Laboratory. *Indiana University Department of Linguistics Colloquium*. November, 2014.