

Yeonggwang Park

Research Assistant Professor
Department of Communication Sciences and Disorders
University of South Florida, Tampa, FL
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Education:

Doctor of Philosophy in Speech, Language, and Hearing Sciences 2020
Department of Speech, Language, and Hearing Sciences
Boston University, Boston, MA
Thesis: *Evaluating the translational potential of relative fundamental frequency*
Thesis Committee: Cara E. Stepp (advisor), Daryush D. Mehta, Kathleen F. Nagle, Joseph S. Perkell

Bachelor of Art in Music, Tenor 2015
Pre-medicine Concentration
Department of Music
Gordon College, Wenham, MA
Magna cum laude

Research Interests:

Voice Disorders; Clinical Voice Assessment; Rehabilitation; Voice Motor Control; Professional Voice Care

Research Skills:

Instrumental assessment of voice
Acoustic calibration and analysis via Praat, MATLAB, and Pentax software
Aerodynamic measurement using Glottal Enterprises and Kay-Pentax Phonatory Aerodynamic System and MATLAB
High-speed videoendoscopic analysis using MATLAB

Auditory-perceptual assessment and experiments of voice quality
Identification, discrimination (AX and ABX), and evaluation (DME, Matching, VAS, and VSR) tasks
Voice/speech stimuli synthesis/modification using UCLA voice synthesizer, the STRAIGHT algorithm, and Praat
Hearing screening

Surface electromyography; Motion capture analysis

Research Experiences:

Auditory & Speech Science Laboratory Oct 2020–Jan 2023
Postdoctoral Fellow, University of South Florida
Supervisors: David A. Eddins and Supraja Anand

Stepp Lab for Sensorimotor Rehabilitation Engineering Feb 2016–Aug 2020
Doctoral Research Assistant, Boston University
Supervisor: Cara E. Stepp

Gordon College Biology Lab Sep 2013–May 2014
Research Assistant, Gordon College
Supervisor: Craig M. Story

Voice Center Research Lab
Research Assistant, Massachusetts General Hospital
Supervisor: James B. Kobler

Jan 2012–May 2012; Jan 2013–Dec 2013

CHA Cancer Research Institute
Summer Intern, CHA Medical School
Supervisor: Seong-Jin Kim

Summer 2012

Awards:

Dudley Allen Sargent Research Fund Grant, Boston University May 2019–Nov 2020
Perceptual and acoustic assessment of strain using synthetically modified voice samples
The goal of this project is to improve the perceptual and acoustic evaluation of strain with a well-controlled, multi-listener, auditory-perceptual study using synthesized voice samples.

Journal Publications:

- [8] **Park Y.**, Anand S., Gifford S.M, Shrivastav R., Eddins D.A. "Development and validation of a single-variable comparison stimulus for matching strained voice quality using a psychoacoustic framework", *Journal of Speech, Language, and Hearing Research*, in press. https://doi.org/10.1044/2022_JSLHR-22-00280
- [7] **Park Y.**, Anand S., Kopf L.M., Shrivastav R., Eddins D.A. "Interactions between breathy and rough voice qualities and their contributions to overall dysphonia severity", *Journal of Speech, Language, and Hearing Research*, 65(11), pp. 4071-4084, 2022. https://doi.org/10.1044/2022_JSLHR-22-00012
- [6] **Park Y.**, Anand S., Ozmeral E.J., Shrivastav R., Eddins D.A. "Predicting perceived vocal roughness using a bio-inspired computational model of auditory temporal envelope processing", *Journal of Speech, Language, and Hearing Research*, 65(8), pp. 2748-2758, 2022. https://doi.org/10.1044/2022_JSLHR-22-00101
- [5] **Park Y.**, Wang F., Diaz Cadiz M.E., Vojtech J.M., Groll M., Stepp C.E. "Vocal fold kinematics and relative fundamental frequency as a function of obstruent type and speaker age", *The Journal of the Acoustic Society of America*, 149(4), pp. 2189-2199, 2021. <https://doi.org/10.1121/10.0003961>
- [4] **Park Y.**, Diaz Cadiz M.E., Nagle K.F., Stepp C.E. "Perceptual and acoustic assessment of strain using synthetically modified voice samples", *Journal of Speech, Language, and Hearing Research*, 63(12), pp. 3897-3908, 2020. https://doi.org/10.1044/2020_JSLHR-20-00294
- [3] **Park Y.**, Perkell J.S., Matthies M.L., Stepp C.E. "Categorization in the perception of breathy voice and its relation to voice production in healthy speakers", *Journal of Speech, Language, and Hearing Research*, 62(10), pp. 3655-3666, 2019. https://doi.org/10.1044/2019_JSLHR-S-19-0048
- [2] **Park Y.**, Stepp C.E. "The effects of stress type, vowel identity, baseline f_0 , and loudness on the relative fundamental frequency of individuals with healthy voices", *Journal of Voice*, 33(5), pp. 603-610, 2019. <https://doi.org/10.1016/j.jvoice.2018.04.004>
- [1] **Park Y.**, Stepp C.E. "Test-retest reliability of relative fundamental frequency and conventional acoustic, aerodynamic, and perceptual measures in individuals with healthy voices", *Journal of Speech, Language, and Hearing Research*, 62(6), pp. 1707-1718, 2019. https://doi.org/10.1044/2019_JSLHR-S-18-0507

Conference Presentations:

- [12] **Park Y.**, Anand S., Shrivastav R., Eddins D.A. "Optimizing the comparison sound for a three-dimensional matching task", *15th International Conference on Advances in Quantitative Laryngology, Voice and Speech Research 2023*, Phoenix, AZ, March 30–April 1, 2023. [poster presentation]
- [11] Eddins D.A., Anand S., **Park Y.**, Awan, S., Shrivastav R. "A comprehensive theoretical framework within which to examine the strained voice quality", *ARO 46th Annual Midwinter Conference*, Orlando, FL, February 11–15, 2023. [poster presentation]
- [10] **Park Y.**, Baker Brehm S., Kelchner L.N., Weinrich B., McElfresh K., Anand S., Shrivastav R., de Alarcon, A., Eddins D.A. "Multidimensional perceptual structure of pediatric dysphonia: Effects of vibratory source", *2022 ASHA Convention*, Louisiana, LA, November 17–19, 2022. [podium presentation]
- [9] **Park Y.**, Baker Brehm S., Kelchner L.N., Weinrich B., McElfresh K., Anand S., Shrivastav R., de Alarcon, A., Eddins D.A. "Pediatric dysphonia: Effects of vibratory source on auditory-perceptual and bio-inspired computational measures of voice quality", *51th Annual Voice Foundation Symposium*, Philadelphia, PA, June 1–5, 2022. [poster presentation]
- [8] Anand S., **Park Y.**, Shrivastav R., Eddins D.A. "Sharpening our ability to quantify vocal strain: Success with a computational model of spectral sharpness and a novel matching stimulus", *51th Annual Voice Foundation Symposium*, Philadelphia, PA, June 1–5, 2022. [podium presentation]
- [7] **Park Y.**, Anand S., Ozmeral E.J., Shrivastav R., Eddins D.A. "Prediction of vocal roughness using measures of temporal envelope fluctuation obtained from an auditory model", *181st Meeting of the Acoustical Society of America*, Seattle, WA, November 29–December 3, 2021. [poster presentation]
- [6] Anand S., **Park Y.**, Shrivastav R., Eddins D.A. "Psychoacoustic correlates of perceived vocal strain: A novel comparison between clean and covary strain samples", *2021 ASHA Convention*, Washington, D.C., November 18–20, 2021. [podium presentation]
- [5] **Park Y.**, Diaz Cadiz M.E., Nagle K.F., Stepp C.E. "Perceptual and acoustic assessment of strain using synthetically modified voice samples", *12th International Seminar on Speech Production*, Providence, RI, December 14–17, 2020. [poster presentation]
- [4] **Park Y.**, Wang F., Diaz Cadiz M.E., Vojtech J.M., Groll M., Stepp C.E. "Vocal fold kinematics and relative fundamental frequency as a function of obstructive type and speaker age", *The Voice Foundation's Virtual Voice Symposium*, May 27, 2020. [podium presentation]
- [3] **Park Y.**, Stepp C.E. "Do people who have breathier voices perceive breathiness differently?," *The Fall Voice Conference*, Seattle, WA, October 25–27, 2018. [poster presentation]
- [2] **Park Y.**, Stepp C.E. "Reliability of relative fundamental frequency and conventional acoustic and aerodynamic measures in individuals with healthy voices", *11th International Conference on Voice Physiology and Biomechanics*, East Lansing, MI, August 1–3, 2018. [podium presentation]
- [1] **Park Y.**, Stepp C.E. "The effects of stress type, vowel identity, baseline f_0 , and loudness on the relative fundamental frequency of individuals with healthy voices," *47th Annual Voice Foundation Symposium*, Philadelphia, PA, May 30–June 3, 2018. [podium presentation]

Teaching Experiences:

SPA 3011 Introduction to Speech Science University of South Florida Instructor	Spring 2021
SAR SH 523 Introduction to Speech Science Boston University Guest Lecture: Measuring the Laryngeal Source (course instructor: Cara E. Stepp)	Fall 2019
SAR SH 531 Introduction to Speech, Language, and Hearing Sciences Boston University Guest Lecture: Research in Profession (course instructor: Diane P. Constantino)	Fall 2017

Professional Service:

Ad hoc Reviewer Journal of Speech, Language, and Hearing Sciences, Journal of Voice	2020–Present
Member, Voice and Voice Disorders Program Committee 2019 American Speech-Language-Hearing Convention	2018–2019