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# **Perception, Technology, and Clinical Applications**

## **SIG 19**

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by Brad Rakerd, Eric J. Hunter, and Peter LaPine

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by Michael I. Mandel, Vikas Grover, Mengxuan Zhao,  
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Tongue Part Movement Trajectories for /r/ Using Ultrasound  
by Sarah Dugan, Sarah R. Li, Jack Masterson, Hannah Woeste,  
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## INTRODUCTION

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These *Perspectives* (SIG 19) articles focus on perceptual considerations and the use of a system to investigate lingual coordination as a clinical tool. In the first article Rakerd et al. review the resonant effects of performers, resonance associated with nasality, and resonant voice for both normal and disordered populations. In the second article Grover et al. use the bubble noise method, which places noise randomly in time and frequency with “holes” or “bubbles” that give glimpses into the target signal, to determine what is perceptually important in the speech signal for native/first language listeners versus nonnative/second language listeners. In the final article, Dugan et al. review TonguePART, an image processing system used to track the tongue surface, as a reliable, fast method to track articulatory movement of the tongue for syllables

## LEARNING OUTCOMES

You will be able to:

- identify perceptual correlates of the actor’s/singer’s formant, hyponasality and hypernasality, and resonant speech
- describe the clinical application of the bubble noise design
- describe characteristics of tongue part movement for children with typical and residual speech sound

## PROGRAM HISTORY

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Start date: July 23, 2020  
Available through: July 21, 2023

## IMPORTANT INFORMATION

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To earn continuing education credit,  
you must complete the test with  
a passing score on or before  
**July 21, 2023.**



ASHA Professional Development is approved by the Continuing Education Board of the American Speech-Language-Hearing Association (ASHA) to provide continuing education activities in speech-language pathology and audiology. See course information for number of ASHA CEUs, instructional level and content area. ASHA CE Provider approval does not imply endorsement of course content, specific products or clinical procedures.

This course is offered for 0.30 ASHA CEUs (Intermediate level, Professional area).