

Centre for Language Sciences Speaker Series 2021: Dr Elaine Kearney

Title

Sensorimotor control of speech and voice production: Insights from experimental and modeling studies

Abstract

Sensory information plays a critical role in speech motor control – from mapping sensory information to motor commands when we first learn how to talk, to maintaining accurate production in the presence of changing physical and environmental demands. For speech and voice production, this sensory information comes from both auditory and somatosensory sources. In this talk, I will review findings from my postdoctoral work that (1) examined the interaction between auditory and somatosensory feedback control during voice production, and (2) tested a simple 3-parameter model that quantifies the relative contribution of feedback and feedforward control mechanisms to speech motor adaptation. Together, these studies offer new insights into the relative contribution of different brain processes to speech and voice production and lay the groundwork for investigating these processes further in clinical populations.



Bio

Elaine Kearney, PhD, is a postdoctoral researcher in the Guenther Speech Neuroscience Laboratory at Boston University. Her research investigates the sensorimotor control of speech in individuals with and without acquired motor speech disorders. Dr. Kearney conducts both basic science and clinical research that capitalizes on her expertise in behavioral, neuroimaging, and computational modeling methods. The long-term goal of her work is to expand the evidence-based treatment options available to those living with neurological disorders.