Department of Psychology
The University of Hong Kong
香港大學心理學系

Departmental Seminar (Via Zoom)

Auditory-motor Interactions during Speech Perception and Production

10:00 a.m. – 11:00 a.m. | January 19, 2023 (Thursday)

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Abstract

Humans' ability to understand and produce speech are remarkable skills, which require precise coding of complex sensory signals and precise coordination of complex motor patterns. The broad focus of my research is understanding auditory-motor interactions during both speech perception and production. On the perceptual side, the motor system has been shown to contribute to speech perception. In this presentation, I will show how we can examine the different contributions of the left and right speech motor cortex to auditory speech discrimination ability in both tonal (e.g. Mandarin) and non-tonal language speakers by combining transcranial magnetic stimulation (TMS) and EEG. On the production, when we speak, we continuously monitor auditory feedback -- the sound of our own voice while speaking. If a mismatch between the expected outcome and actual auditory feedback is detected, we use the mismatch to gradually modify our subsequent movements. To this end, I will mainly discuss my research work using altered auditory feedback as a window into the neural bases of speech motor control. More specifically, I will show how we can characterize the long-range network that supports the sensorimotor control of speech production by combining this real-time perturbation paradigm with brain stimulation (e.g. TMS) and neuroimaging techniques (e.g. M/EEG).

About the Speaker

Dr Tang is currently a postdoctoral fellow at Speech Motor Neuroscience Group at UW–Madison. Previously, she completed her Ph.D degree at the University of Oxford under the advisement of Prof. Kate Watkins and Prof. Charlotte Stagg. Her research focuses on improving our understanding of how the human brain communicates, and ultimately increasing the effectiveness of future clinical interventions for patients with speech disorders. She uses a mixture of behavioural testing (e.g. real-time feedback perturbation), transcranial magnetic stimulation (TMS), and magnetoencephalography/electroencephalography (M/EEG) and so on.

Zoom Meeting

https://hku.zoom.us/j/3951550048?pwd=SncvL3RYakEycUtpL29vdDJEdlEwdz09
Meeting ID: 395 155 0048 | Password: psyc

~All are Welcome~

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