



Department of Psychology
The University of Hong Kong

香港大學心理學系

Departmental Seminar (Via Zoom)

Bach meets Du Fu: Temporal Segmentation and Prediction in Jueju and Chorale

12:30 p.m. – 1:30 p.m. | October 19, 2022 (Wednesday)



Dr. Xiangbin TENG

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Department of Psychology

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Abstract

Spoken language and music are characterized by hierarchical structures that unfold over time. Listening to speech and music, therefore, requires the brain not only to process syllables or notes, but also to internally construct high-level linguistic and musical structures (e.g., sentences and musical phrases) and anticipate incoming contents. In this talk, I will present two studies on ancient Chinese poetry and Western classical music, in which we probed mechanisms of hierarchical structure building and prediction in speech and music perception. Using MEG and EEG recording, we discovered low-frequency neural oscillatory components ($< 1\text{Hz}$) that reliably parsed musical and linguistic high-level structures. We next identified a phenomenon – phase precession, suggesting that listeners established structural predictions for high-level structural boundaries. The data reveal candidate brain mechanisms that listeners use to segment continuous music and speech streams and to predict abstract structural features.

About the Speaker

Dr. Teng joined the Department of Psychology in the Chinese University of Hong Kong as an assistant professor in 2022. Before, he worked in Max Planck Institutes in Frankfurt am Main and Berlin, Germany, and earned his PhD in Cognition and Perception at New York University. His lab aims to understand how the brain processes complex temporal sequences, regarding natural stimuli such as spoken language and music that are critical to our daily communication and separate us from other species.

Zoom Meeting

<https://hku.zoom.us/j/3951550048?pwd=SncvL3RYakEycUtpL29vdDJEEdlEwdz09>

Meeting ID: 395 155 0048 | Password: psyc



~All are Welcome~

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