

**Harvard University  
GSAS Universals Workshop**

**Speaker:** Dr. Kathryn Franich (Harvard University)

**Date and time:** April 14, 2023, 12:00 pm

**Location:** Emerson Hall 101

**Zoom link:** email [Workshop Coordinators](#)

**Title:** Probing Tonal Timing Through Speech and Co-Speech Gesture

**Abstract:** Patterns of articulatory timing have been found to have bearing on questions of prosodic typology. Of particular note is the discovery of the c-center effect (Browman & Goldstein 1988, 2000; Nam & Saltzman 2003; Marin & Pouplier 2010; Shaw & Gafos 2015): in many languages, consonant clusters in syllable onsets are characterized by global articulatory timing patterns, such that consonantal articulatory gestures are competitively timed to those of a vocalic nucleus, whereas consonantal gestures associated with the coda will be timed locally, such that only the gestures of the first consonant in a coda cluster will be crucially timed to the vowel. Lexical tone has received much less attention in the context of this work, though a study by Gao (2008) demonstrates that tones in Mandarin Chinese display similar timing behavior to onset consonants, existing in a competitive timing relation with consonantal gestures within the syllable onset. More recent work by Zsiga (2022) has demonstrated that tonal timing works differently in Igbo, a Niger-Congo language, calling into question how widespread the tonal c-center effect may be in African languages. In this paper, I provide acoustic evidence that tones in Medumba (Grassfields Bantu), similarly to those in Mandarin, compete with onset consonants in their relative timing to the vowel. Furthermore, I provide evidence that co-speech gestures, where present, perturb tonal timing in a way that partially mirrors the speech-articulatory c-center effect. I discuss implications of these findings for tonal and prosodic typology, arguing that they may also help to explain some aspects of tone-stress interactions.