Ling. 204B, Speech Production  
Pat Keating  
Spring 2019

class: Campbell 2101K, Tues 10-12 and Fri 2-4  
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office hours: Mon 10-11:45, Tues 2-5, Thurs 2-5, and by appt.

Course Description: Survey of topics in speech production research, especially as related to linguistic phonetics. Topics include physiology of the vocal tract and models of speech production and articulatory/acoustic relations. Emphasis on use of laboratory methods such as aerodynamic transducers, electroglottography, static and electropalatography, electromagnetic articulography, and imaging techniques. Prerequisite: Linguistics 104 or equivalent. Counts as an elective for the MA course requirement.

Course requirements:
- class presentations about readings/techniques  
- participation in class experiment  
- final paper = proposal for an experiment, including some pilot data

(There is no 2-unit option for 204B, but you can enroll in 2 units of 596A to participate in classes but not in experiments.)

CCLE course website: https://ccle.ucla.edu/course/view/19S-LING204B-1  
Will be used for posting links to readings, and backups of class handouts.

Textbook: There is no text for this course, though I will draw on:

Partial schedule of topics and readings

Week 1: Overview

Tues 4/2 intro, sample data from SOWL
Fri 4/5

**Reading:** survey of methods, begin larynx structure and function
Stone (2010) (Ch. 1 in HPhS)

**Week 2: Voice**

Tues 4/9

**Reading:** larynx structure and function (cont.)
Gick et al. Chs. 5 & 6

Fri 4/12

**Reading:** EGG (with demo)
Hanson (2012) “Methodologies used to investigate laryngeal function and aerodynamic properties of speech”

**Supplementary:** Story 2019 (Ch. 3 in HSpPr); Gobl & NiChasaide 2010 (Ch. 11 in HPhS), Hirose 2010 (Ch. 4 in HPhS), Zhang 2016 (Mechanics of human voice production and control, *JASA 140*); B&O pp. 415-427

**Week 3: Voice, Ultrasound**

Tues 4/16

**Presentations:** EGG analysis (with demo)
recent papers using EGG or glottal imaging data (see separate handout)

Fri 4/19

**Reading:** intro to ultrasound
Davidson (2012) “Ultrasound as a tool for speech research”, ch. 18.2 in *The Oxford Handbook of Laboratory Phonology* (ed. Cohn et al.)

**Supplementary:** Derrick et al. (2018) “Three-dimensional printable ultrasound transducer stabilization system” *JASA* Nov.

**Week 4: Ultrasound**

Tues 4/23

**Reading:** ultrasound analysis
Hoole & Pouplier (2017) “Ohman returns: New horizons in the collection and analysis of imaging data in speech production research”, *Comp. Sp. & Lg. 45*, 253-277

**Presentations:** recent papers using ultrasound data (see separate handout)

Fri 4/26

**Supplementary:** analysis, continued; planning class project