

# INTRODUCTION TO SPEECH SCIENCE

## Week 2 – Vocal Fold Vibration

### Key points to understand

- Source-filter theory of speech production
- The cycle of vocal fold vibration (i.e., phonation cycle)
- How vocal folds can change pitch and voice quality
- How problems with the vocal folds can cause voice pathologies
- How the Laryngograph can be used to analyze vocal fold vibration

### Readings

#### *Recommended:*

Fry, D. B. (1979). *The Physics of Speech*. Chapter 6 (pp. 61-70).

#### *Background:*

Borden, G. J., Harris, K. S., & Raphael, L. S. (1994). *Speech Science Primer*. The *Phonation* section of Chapter 4 (pp. 72-89).

Baken, Clinical Measurement of Speech and Voice (1st edition), Chapter 6: Laryngeal function.

Abberton & Fourcin (1997) Electrolaryngography. In Ball & Code, Instrumental Clinical Phonetics.

### Useful Websites

<http://www.haskins.yale.edu/haskins/HEADS/MMSP/acoustic.html>

[http://www.columbia.edu/itc/psychology/rmk/T2/sf\\_theory.html](http://www.columbia.edu/itc/psychology/rmk/T2/sf_theory.html)

<http://www.voice.northwestern.edu/howworks.html>

<http://www.medicine.uiowa.edu/otolaryngology/cases/index1.htm>

<http://www.voicedoctor.net/media/video/index.html>