

**INTRODUCTION TO SPEECH SCIENCE**  
**WEEK 7: THE CHALLENGE OF SPEECH PERCEPTION**

AT THE END OF THIS SESSION, YOU SHOULD KNOW:

- What are the basic acoustic cues for speech
- Why phonemes are not "beads on a string"
- The major sources of variability in the speech signal
- How adding noise makes speech recognition difficult
- That speech does not have any "necessary or sufficient" cues

**Readings on acoustic cues**

*Recommended:*

Ladefoged, P. (1993). *A Course In Phonetics*. Chapter 3.

Fry, D. B. (1979). *The Physics of Speech*. Chapter 10.

*Background:*

Ladefoged, P. (1996). *Elements Of Acoustic Phonetics*. Chapter 8.