OVERVIEW
The process of speech perception might be approximated to the process by which readers perceive letters on a page. The phonetic cues available to the listener in deciphering the speech signal might bear the same relation to the spoken word as letters do to the written word. In fact, speech is not neatly packaged in this way.

Readings

Parallel Transmission
Information from consecutive phonetic segments overlap with each other. Strong context effects are the norm rather than the exception in speech perception. Artificial speech recognisers have extraordinary difficulty accommodating to this state of affairs.

Readings
**Acoustic and Motor Theories of Speech Perception**

Many of the complexities of speech perception can be understood if it is assumed that speech is perceived by matching the input against the output of an internal speech synthesiser that contains an abstract model of the mouth. The motor theory of speech perception contrasts dramatically with the view that speech is perceived by extracting acoustic properties from the input. Recently, studies using functional imaging and TMS have suggested a causal role for the motor cortex in speech perception.

**Readings**


**Categorical Perception**

Many distinctions between phonemes depend upon detailed timing differences in the operation of the articulators in the vocal tract. There is substantial evidence that human speech perception is pre-wired to pick up these distinctions. This suggests that acoustic factors also play a key role in the perception of speech. Surprisingly, these perceptual skills do not seem to be limited to homo sapiens.
Acquisition
Infants demonstrate precocious speech processing abilities, which prepare them for the complex process of language acquisition. How does the capacity for speech processing change during the first year of life?

Readings


The following website is very helpful:
http://www.psychology.uiowa.edu/labs/maclab/speech_perception.asp
Essay Questions or Presentation Topics

1. Evaluate the current status of the Motor Theory of Speech Perception. What are its primary drawbacks?
2. What are the difficulties involved in constructing an artificial speech recognition device? Do you think these difficulties can be overcome?
3. Is the categorical perception of speech a specifically linguistic skill?
4. How do you think the initial, universal speech categories of infancy might become modified as a particular language is learned?
5. How does the motor theory explain duplex perception? Could this phenomenon be explained by the FLMP?
6. How has the development of new experimental methodologies improved our understanding of speech perception in infancy?
7. What is the relationship between coarticulation and lack of invariance?