

**CENTER FOR COGNITIVE SCIENCE**  
University at Buffalo, State University of New York

**Wednesday, October 20, 2004**

280 Park Hall  
North Campus  
2:00 pm –4:00 pm

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**"Adapting to foreign-accented speech:  
Implications for theories of spoken word recognition"**

In contrast to written language, speech contains a great deal of variability. The acoustic signal corresponding to a particular word or phoneme can vary tremendously when different people say it. The sources of this variability include, but are not limited to, the size and shape of the speakers vocal tract, the rate of speech, and the speaker's dialect or accent. Because there are few, if any, consistent acoustic markers that reliably signal a particular phoneme such as /d/ or /a/, it is not clear how listeners so easily recover the intended linguistic information. One way listeners may deal with variability in speech is by learning about the speech characteristics of the people they encounter. There is now good evidence that listeners are better able to understand the speech of someone whose voice they are familiar with. Listeners also seem to tune their perceptual criteria to the current talkers characteristics within just seconds of speech. Unfortunately, theoretical models of spoken word recognition are lagging behind the experimental findings. Current popular models assume constant, abstract representations of phonemes and words, and are unable to explain rapid perceptual learning. In this talk I will present evidence of rapid adaptation to speech characteristics, explore some fundamental problems with traditional models of spoken word recognition, and propose some new directions that may be fruitful in accommodating both the stable and the flexible aspects of human speech perception.

**Refreshments will be available**

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