

Ph.D. Program in Speech-Language-Hearing Sciences

Fall 2017 Colloquium
Wednesday, November 29, 2017
2:45 p.m. - 4:00 p.m., Room 7102

Dr. Lauren Emberson
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*“How Does Experience Support Perceptual
Development? The Role of Prediction.”*

Abstract:

A hallmark of development is the tuning of perceptual systems to the structure of the environment. These perceptual changes support the development of key abilities such as language comprehension and face processing. I argue that learning and memory systems not only uncover the structure in real-world experience, they can use prediction to shape developing perceptual systems. To this end, I use functional near-infrared spectroscopy (fNIRS) to record the same physiological signals as fMRI (i.e., hemodynamic response) using light. This emerging neuroimaging modality allows spatial localization of neural signals while infants are awake and learning. Using fNIRS, I'll present evidence that perceptual systems are shaped by prediction early in life and within minutes of experience. I'll also show that individual differences in early prediction are closely linked to language development and early prediction is impaired in at-risk populations.

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