- Friday, March 16, 2007
  Cross-modal tactile/visual face recognition

  In this talk, I will offer an overview of a new multidisciplinary research program that focuses on the haptic processing of human facial identity and facial expressions of emotion. I will begin by briefly deriving from my earlier research a set of important general principles that influence haptic (cf. visual) processing. I will then describe a recent series of perceptual and neuroscience experiments with live faces and rigid three-dimensional facemasks that have used several converging paradigms: behavioural experiments with neurologically intact participants, behavioural experiments with neurologically impaired populations (prosopagnosia), and neuroimaging (fMRI). In each case, we asked what would happen if hands were substituted for eyes. The results reveal that with little practice we humans can haptically determine both identity and primary emotional expressions in facial displays at levels well above chance. Clearly face processing is a bimodal phenomenon. I will further consider these findings in terms of the functional and neural processes and representations that may underlie haptic face processing.

  Susan Lederman
  Queens