ELSC-ICNC Seminar: Dov Sagi

January 17, 2013

On the topic of: "Generalized perceptual learning in the absence of sensory adaptation"

ELSC & ICNC cordially invite you
to the lecture given by:

Dov Sagi
Department of Neurobiology, Weizmann Institute of Science

On the topic of:

"Generalized perceptual learning in the absence of sensory adaptation"

The lecture will be held on Thursday, January 17, 2013
at 17:00, at ELSC-ICNC: Silverman Bldg., 3rd Wing, 6th Floor, Edmond J. Safra Campus

Light refreshments at 16:45

Abstract:

Repeated performance of visual tasks leads to long-lasting increased sensitivity to the trained stimulus, a phenomenon termed perceptual learning. A ubiquitous property of visual learning is specificity: performance improvement obtained during training applies only for the trained stimulus features, which are thought to be encoded in sensory brain regions. However, recent results show performance decrements with an increasing number of trials within a training session. This selective sensitivity reduction is thought to arise due to sensory adaptation. Visual adaptation affects perception at multiple levels of processing, on a wide range of spatial and temporal scales. We show, using the standard texture discrimination task, that location specificity is a consequence of sensory adaptation, that is, it results from selective reduced sensitivity due to repeated stimulation. The results indicate location specificity with the standard paradigm, but complete generalization to a new location when adaptation is removed. We suggest that adaptation interferes with invariant pattern-discrimination learning by inducing network-dependent changes in local visual representations.

[Work done with Hila Harris.]
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