Research Topics

Recent media attention:

New Findings on Dyslexia May Aid Diagnosis, Intervention [1](PsychCentral)[1]
Dyslexia linked to shorter memory trace of previous stimuli (Science Daily) [2]
Hebrew U. researchers gain insight into brain mechanisms underlying dyslexia (Jerusalem Post) [3]
How does dyslexia sound? (TheMarker), [4]

Recent talks in English:

The Predictive Brain [6].
Perception and Dyslexia: A Computational Framework [7].

Recent talks in Hebrew:

How do we learn new skills? (Cinema & Brain week) [8]
Relation between memory, perception and learning (Madua series) [9]

Auditory perceptual learning [10]
putting it within a consistent conceptual framework (does it follow RHT predictions?) using behavioral, ERP and MEG measurements. Project with Srikantan Nagarajan, funded by NIH.

Read More [10]

Perceptual plasticity [11]
A search for a unified framework for studying the various manifestations of perceptual plasticity: Perceptual learning. Adaptation. Priming. What is the role of top-down control in each of these phenomena?
Read More [11]

Reverse Hierarchy Theory [12]
Exploring further the theory of reverse hierarchy (Ahissar & Hochstein, 1997) in the general context of perception.
The perceptual basis of cognitive abilities

What (if any) are the perceptual deficits that underlie cognitive difficulties in the general population? Are there cognitive "primitives"? Can they be probed with perceptual tasks?

The perceptual basis of reading and learning disabilities

What are the main visual and auditory processing difficulties that learning disabled suffer from? In what way are they functionally linked to their cognitive difficulties.

The relations between perception in the lab using simple, out of context, stimuli and natural perception

The project aims to assess the dynamics of visual processing as revealed by behavior, patterns of eye movements and ERP. Particularly, to what extent global stimulus characteristics dominate initial perception compared with local aspects that do not impact the categorical level (i.e.
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