ELSC-ICNC Seminar: Rafi Malach

June 6, 2013

On the topic of: "Mapping a-priory biases in the human cerebral cortex"

ELSC & ICNC cordially invite you

to the lecture given by:

Rafi Malach
Department of Neurobiology, Weizmann Institute of Science

On the topic of:

"Mapping a-priory biases in the human cerebral cortex"

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

Light refreshments at 16:45

Abstract:

Human sensory perception is the product of both incoming signals and a-priory information. However, most brain imaging research focus on sensory activations in which these two types of information are entangled. In my talk I will propose that the recently described ultra-slow spontaneous fluctuations of BOLD-fMRI signals provide an opportunity to map such a-priory information separately from the incoming information. In support of the hypothesis I will present evidence that the spontaneous fluctuations reflect the cortical correlation structures that emerge under naturalistic sensory stimulation. Furthermore, they can be restructured in a Hebbian-like manner following intense cortical activation. Together these findings are compatible with the notion that the spontaneous fluctuations reflect the a-priory biases of human cortical connectivity? opening the intriguing possibility that they may be used for mapping individual cognitive traits in health and disease.
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