ELSC-ICNC Seminar: Yizhar Bar Gad

March 29, 2012

On the topic of: Decorrelation breakdown in the abnormal basal ganglia

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

Yizhar Bar Gad
Gonda Brain Research Center Bar Ilan University

On the topic of:

"Decorrelation breakdown in the abnormal basal ganglia"

The lecture will be held on Thursday, March 29, 2012
at 17:00, at ELSC-ICNC: Silverman Bldg., 3rd Wing, 6th Floor, Edmond J. Safra Campus

Light refreshments at 16:45

Abstract:

The basal ganglia are a group of interconnected nuclei which play a pivotal part in limbic, associative, and motor functions. This role is mirrored by the wide range of motor and behavioral abnormalities directly resulting from dysfunction of the BG. Studies of normal behavior have found that basal ganglia neurons tend to phasically modulate their activity in relation to different behavioral events in a highly specific manner. This neuronal response pattern leads to uncorrelated activity in the temporal and spatial domains. Correlated cortical input undergoes an active decorrelation process which is crucial for the correct function of the basal ganglia. In multiple pathological conditions involving basal ganglia dysfunction, the process of decorrelation breaks down. Examples will be given from studies of animal models of tic disorders and parkinsonism. These neurophysiological findings will be related to theoretical model of basal ganglia function and to the potential basis of the different disorders.
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