ELSC-ICNC Seminar: Adam Kohn

January 19, 2012

On the topic of: Coordinated neural activity and its role in corticocortical signaling

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

Adam Kohn
Albert Einstein College of Medicine Rose F. Kennedy Center

On the topic of:

"Coordinated neural activity and its role in corticocortical signaling"

The lecture will be held on Thursday, January 19 at 17:00, at ELSC-ICNC: Silverman Bldg., 3rd Wing, 6th Floor, Edmond J. Safra Campus

Light refreshments at 16:45

Abstract:

Spiking activity in cortex is coordinated on a range of spatial and temporal scales. Numerous studies have shown that external events and internal states can alter this coordination, and that this in turn can affect coding by neuronal populations. Much less explored is how coordinated activity affects the relaying of signals between cortical areas and the computations they perform. To tackle this issue, we have recorded simultaneously from populations of neurons in the superficial layers of primary visual cortex (V1) of macaque monkeys, and from their downstream targets in the middle layers of V2. We find that in a small proportion of recorded pairs, a spike in V1 is followed by one V2. In these pairs, successfully propagated spikes are associated with a brief increase in V1 correlation. Finally, stimulus manipulations that enhance brief timescale synchrony, and gamma power in the local field potential, lead to stronger inter-areal coupling. Our results suggest that network coordination can affect the relaying of signals between cortical areas.
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