ELSC Seminar: Dr. Ayelet N. Landau

January 14, 2016

on the topic of: "Rhythmic motifs in cognition: the case of attentional sampling"

ELSC cordially invites you to the lecture given by:

Dr. Ayelet N. Landau

Department of Cognitive Sciences and Department of Psychology, The Hebrew University of Jerusalem.

On the topic of:

"Rhythmic motifs in cognition: the case of attentional sampling"

The lecture will be held on Thursday January 14th at 17:15, at ELSC: Silverman Bldg., 3rd Wing, 6th Floor, Edmond J. Safra Campus.

Light refreshments at 17:00

Abstract:

Rhythmic temporal structure is a recurring theme in the field of cognitive neuroscience. It spans physiology as well as behavioral performance and provides interesting brain behavior links. In my talk I will describe work focusing on one aspect of rhythmic cognition: Attentional sampling. When subjects monitor a single spatial location, target detection depends on the pre-target phase of an ~8 Hz brain rhythm. When multiple locations are monitored, performance decrements suggest a division of the 8 Hz rhythm over the number of locations. This suggests that different locations are sequentially sampled. Indeed, when subjects monitor two locations, performance benefits alternate at a 4 Hz rhythm. These performance alternations followed a reset of attention to one location. Although resets are common and important events for attention, it is unknown, whether in the absence of resets, ongoing attention operates rhythmically. In my talk I will survey evidence for rhythmic sampling with and without resets. I will present recent data demonstrating that ongoing pre-target brain rhythms track the attentional sampling frequency. Finally, I will present an elaboration of the attentional sampling notion to different types of attention.
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