



THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Vision and Robotics Seminar

Room 1 ,Ziskind Building
on Thursday, May 25, 2017
at 12:15

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Neuronal "Ignitions" underlying stable representations in a dynamic visual
environment

Abstract:

The external world is in a constant state of flow- posing a major challenge to neuronal representations of the visual system that necessitate sufficient time for integration and perceptual decisions. In my talk I will discuss the hypothesis that one solution to this challenge is implemented by breaking the neuronal responses into a series of discrete and stable states. I will propose that these stable points are likely implemented through relatively long lasting "ignitions" of recurrent neuronal activity. Such ignitions are a pre-requisite for the emergence of a perceptual image in the mind of the observer. The self-sustained nature of the ignitions endows them with stability despite the dynamically changing inputs. Results from intracranial recordings in patients conducted for clinical diagnostic purposes during rapid stimulus presentations, ecological settings, blinks and saccadic eye movements will be presented in support of this hypothesis.