Chen Institute Symposium 2023

Speaker: Lisa Giocomo

Talk title: Learning and adapting the structure of neural maps on behavioral timescales

Abstract: Over the last several decades, the tractable response properties of parahippocampal neurons have provided a new access key to understanding the cognitive process of self-localization: the ability to know where you are currently located in space. Defined by functionally discrete response properties, neurons in the medial entorhinal cortex and hippocampus are proposed to provide the basis for an internal neural map of space, which enables animals to perform path-integration based spatial navigation and supports the formation of spatial memories. My lab focuses on understanding the mechanisms that generate this neural map of space and how this map is used to support behavior. In this talk, I'll discuss how learning and experience shapes our internal neural maps of space to guide behavior.