

## Chen Institute Symposium 2023

**Speaker:** Loren Frank

**Talk title:** Memories and mental simulation

**Abstract:** As an animal explores an environment it creates memories of its experiences. These memories are useful because they can be retrieved to help animal make to predictions about future events. Adaptive behavior engages both memory formation and memory-based prediction, but how these two functions are expressed and coordinated remains unclear. In this talk I will discuss work from our laboratory that is helping us understand the structure of representations of past, present, and potential future in the hippocampus and how these representations are coordinated with activity elsewhere in the brain.