

197th WPI-IIIS Seminar

Dissection of a memory engram to understand how associative memories are formed

When an associative memory is formed? Which cells represent memories, and when are they engaged? By visualizing and tagging cells based on their calcium influx with unprecedented temporal precision, we identified non-overlapping dorsal *CA1* neuronal ensembles that are differently active during associative fear memory acquisition. These ensembles disproportionately contribute to fear engram formation: optogenetic reactivation of shock- and freezing-responding cells is sufficient and necessary for memory recall, while the activity of pre-shock- and no-freezing-responding cells is not. This study revealed, for the first time, the unique contribution of cells active at specified time points to the formation of a memory trace.



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Date: **Friday, May 24, 2024**

Time: **10:00 – 11:00**

Venue: **1F Auditorium, IIIS Building**

*** On-site participation only**



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