

MIND MEETING

Seminar Series

2021

All welcome!
Attendance is free

04 November

5 pm online talk via Zoom

please contact psy-office@cbs.mpg.de for login details

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Concept cells in the human medial temporal lobe

The medial temporal lobe is critical for the transformation of external objects into mental representations that can be later available for further elaboration and conscious retrieval. These mental representations can be studied at the single neuron level in rare neurosurgical settings when patients who can declare their percepts, memories and volitions, are implanted with intracranial electrodes for clinical reasons and are monitored for several days. I will discuss a unique subset of cells in hippocampus, entorhinal cortex and amygdala exhibiting multimodal invariance, enabling transcendence and abstraction of sensory input. These cells operate on a neural code which is sparse, highly associative and dynamic, relatively late (around 350 msec), evident during conscious perception and replayed during imagery and free spontaneous recall. Modulation of the code by internal volitional signals as well as by external electric stimulation will be discussed.



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