



Talks by rising stars of neuroscience

Learning predictive maps in the brain for spatial navigation

Will de Cothi

(UCL)

The predictive map hypothesis provides a promising framework to model representations in the hippocampal formation. I will introduce a tractable implementation of a predictive map called the successor representation (SR), before presenting data showing that rats and humans display SR-like navigational choices on a novel open-field maze. Next, I will show how such a predictive map could be implemented using spatial representations found in the hippocampal formation, before finally presenting how such learning might be well approximated by phenomena that exist in the spatial memory system - namely spike-timing dependent plasticity and theta phase precession.

Event link:

<https://www.crowdcast.io/e/wwneurise/>