MAX PLANCK INSTITUTE
FOR HUMAN COGNITIVE AND BRAIN SCIENCES

Dr. Angharad N. Williams | Spatiotemporal dynamics of schema-guided memory retrieval

Project Presentation (internal)

DATE: **Jun 14, 2021**

TIME: **14:00 - 15:00**

SPEAKER: **Dr. Angharad N. Williams**

Max Planck Research Group Adaptive Memory

LOCATION: **MPI for Human Cognitive and Brain Sciences**

ROOM: **Zoom Meeting**

HOST: **Max Planck Research Group Adaptive Memory**

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The medial prefrontal cortex (mPFC) and the hippocampus (HPC) are both involved in memory retrieval (Benoit & Schacter, 2015), yet they seem to support distinct retrieval stages. For instance, during the retrieval of autobiographical memories, activation in the mPFC has been shown to precede activity in the HPC (McCormick et al., 2020). We hypothesize that the mPFC augments hippocampal retrieval of specific episodes by instantiating general memory schemas (Ghosh & Gilboa, 2014). Here, using MEG, we plan to investigate mPFC-HPC dynamics during a schema-guided memory retrieval task. For a parallel 7T fMRI study, we predict that the mPFC represents schema-relevant information (here: categories), whereas the HPC represents episodic memory content (here: exemplars). In the proposed MEG study, using standalone MEG and fusion MEG-fMRI analyses, we want to test the complementary prediction that mPFC category processing precedes hippocampal exemplar processing.