

Temporal dynamics of memory integration: Neurocognitive mechanisms and behavioural implications

Project leaders: Dr. Inês Bramão and Prof. Mikael Johansson

Episodic memory enables us to revisit the past to inform and shape current thinking and behaviour. Recent work in the cognitive neuroscience of memory has described how reactivated memories may influence the encoding of new episodes and has proposed learning mechanisms that integrate information across episodes. The current project aims to shed light on the neural and cognitive mechanisms supporting such memory integration. To this end, we will investigate real-world aspects of episodic memory using novel behavioural paradigms in combination with state-of-the-art analysis methods (e.g., multivariate pattern analysis – MVPA) applied to high-temporal resolution brain data (Electroencephalography – EEG). The proposed PhD project will advance current understanding of memory by tracking memory reactivation as it unfolds and examine its consequences for current and future thinking and behaviour.