Sequential Event Memory Formation and Reactivation in the Hippocampus and Beyond

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By introducing arrays of microelectrodes into hippocampal, subcortical, and neocortical areas of freely behaving rodents, we have characterized the detailed structure and content of memory patterns across ensembles of individual neurons as they are formed during spatial behavior, and reactivated during quiet wakefulness, and sleep. I will discuss the involvement of sleep rhythms in coordinating interactions between these brain systems during memory reactivation.