The Cognitive Neuroscience of Episodic Memory: A Perspective from fMRI

Michael D. Rugg

University of Texas at Dallas, USA

Episodic memory – memory for unique events - is a core cognitive capacity. In this talk I will describe evidence from functional neuroimaging (fMRI) studies that sheds light on the neural networks that support the encoding and retrieval of episodic information, and how encoding and retrieval processes interact in support of episodic memory. The data demonstrate that, as has long been suspected from neuropsychologial and animal studies, the hippocampus and adjacent medial temporal lobe regions play a key role during both encoding and retrieval. The data further show that these regions do not operate in isolation, but instead act in concert with distributed cortical networks to support control and representational processes critical for successful memory function.