NANYANG TECHNOLOGICAL UNIVERSITY
SINGAPORE

School of Social Sciences
College of Humanities, Arts, and Social Sciences

Psychology
cordially invites you to the following seminar

The dynamics of memory -- decoding brain activity with machine learning

by
Prof Christoph Weidemann
(Swansea University, UK)

Date: Thursday, 28 March 2019
Time: 11:45am
Venue: HSS Meeting Room 6 (HSS-04-95)

Biography

Christoph is a Cognitive Scientist and Experimental Psychologist that has published widely in the fields of memory, perception, and decision making. He studied Psychology at the University of Bonn in Germany and received a PhD from Indiana University Bloomington, USA. He has worked at the Max Planck Institute in Berlin and the University of Pennsylvania, before joining Swansea University in Wales, where he has been teaching and researching as a Lecturer and Associate Professor since 2010..

Abstract

Even though encoding and retrieval processes are both critical determinants of performance in memory tests, only their joint effects are observable in overt behavior. This has led to contentious debates about the nature of the signal elicited by recognition memory probes and about the relative contributions of encoding and retrieval processes in interactions between semantic and episodic memory systems. Using machine learning techniques to quantify relevant signals in brain activity as they unfold during engagement in memory tasks I will address these controversies. Specifically, I will present evidence for a single-route account of recognition memory that is compatible with contributions from familiarity and recollection signals, but relies on a unitary evidence signal that integrates all available evidence. I will also particularly implicate retrieval (rather than encoding) processes in the categorical organization of episodic memories.

All are welcome!