Patients with neurological diseases such as epilepsy or focal brain lesions often present with disruptions of psychological functions such as memory or planning abilities and can suffer from alterations of their mental state. Investigations into the relationship between specific lesions and disorders and changes in mental functions can provide important insights into brain-mind and brain-behaviour relationships. In this respect neuropsychiatry provides a unique resource for the exploration of the way in which the brain enables mind. The speakers will give examples of neurophysiological and neuroanatomical models of higher mental functions that are inspired by the clinical experience of patients with epilepsy and focal brain lesions and invasive treatment approaches such as deep brain stimulation. They will discuss the lessons that basic neuroscience can learn from neuropsychiatry, but also how basic neuroscience crucially support the development of new pathophysiological models and rational treatments.

Chair: Professor David Linden (Cardiff University)

Speaker 1: Professor Adam Zeman (University of Exeter Medical School)
'Disorders of visual imagery'

Speaker 2: Dr Valerie Voon (University of Cambridge)
'Impulse control'

Speaker 3: Dr Nils Muhlert (University of Manchester)
'What amnesia tells us about memory functions'

Speaker 4: Professor David Linden (Cardiff)
'Brain control - scientific and clinical developments and ethical implications'