



## 216th Lecture Series 7.30pm - 28th February 2018

**Professor Kate Jeffery**

### **Illuminating memory: optogenetics and the new science of the mind**



#### **ABSTRACT**

#### **BIOGRAPHY**

*I originally trained as a doctor, in my native New Zealand. During my medical training I became very interested in the brain and how it works, and in particular, how it could form mysterious entities such as thoughts, beliefs and consciousness using only neurons. After qualifying I undertook an MSc with Cliff Abraham, at Otago University in Dunedin, NZ, where I studied a physiological phenomenon known as LTP, thought to be a memory mechanism. After that I was hooked on research and so I moved across the planet from Dunedin to Edinburgh to study for my PhD with Richard Morris, looking at how LTP in rats relates to their navigation behaviour. I then spent my postdoc years with John O'Keefe at University College London, learning to study spatially sensitive neurons at the single-cell level, after which I took up a lectureship across the road in the Division of Psychology, where I have been ever since and where I continue to study how neural encoding is related to navigation behaviour. Bringing behavioural and physiological science together has always been a big goal of mine, in both teaching and research, and so in 2006 I founded the "Institute of Behavioural Neuroscience," a laboratory comprising several animal researchers who use physiological methods to study cognition. Between 2010 and 2013 I was head of the Research Department of Cognitive, Perceptual and Brain Sciences, after which I stepped down to concentrate more fully on research, recently securing a Wellcome Investigator Award to conduct a five-year study of how the spatially sensitive neurons encode complex spaces. In addition to research I am also co-director, with my husband Jim Donnett, of an electrophysiology instrumentation company called Axona Ltd, which makes recording systems to allow the study of single neurons in awake and freely behaving animals. We have three daughters, which has helped foster an active interest in promoting the career development of women, especially in science.*

#### **LINKS**

<https://www.ucl.ac.uk/pals/research/experimental-psychology/person/kate-jeffery/>

**All lectures take place in Lecture Theatre K3.25, John Anderson Building,  
University of Strathclyde, Rottenrow East, Glasgow G4 0NG.**

The John Anderson Building is in the pedestrianised area between Rottenrow and Rottenrow East.  
Free car parking is available behind the building. From High Street enter Rottenrow East at the Barony.  
*Refreshments will be served at 9.00pm.*