

# Cognitive Psychology Section Annual Conference

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## **Voices on the brain - the neuroscience of vocal communication**

### **Abstract**

In my talk I will consider the different ways that voices are processed in the human brain, including speech, emotion and identity information, as well as links between perception and production networks. I will use a neuroanatomical framework to start mapping out these processes, and show how this relates to the anatomical and functional perceptual systems seen in non-human primate brains. I will address hemispheric asymmetries, and the qualitatively different kinds of information which are preferentially processed in the right and left hemispheres. Finally, I will argue that we need to start to address the social use of voices – e.g. in conversational speech and laughter – in order to understand many of the patterns of activations that we see.

### **Biography**

I completed a PhD in Cognitive Science at University College London on the perception and production of rhythm in speech, which was awarded in 1994. I started working at the MRC Applied Psychology Unit, Cambridge in 1993, and I have been based back at UCL as a researcher since 1998. I was awarded a Wellcome Trust Career Development fellowship in 2001, and a Wellcome Trust Senior Fellowship in 2005, renewed in 2010. My research addresses human communication and the human brain, and I am interested in both how our brains support communication and how this can go wrong. I am particularly interested in using models of auditory processing to inform my work, and in addressing both verbal and non-verbal aspects of vocal communication. I have pioneered the study of the human voice as a social signal, and have recently started to address the ways that non-verbal emotional expressions like laughter are used socially.

I was promoted to a Chair in Cognitive Neuroscience in 2006, and to Deputy Director of the ICN in 2013. I have published 118 peer reviewed academic papers, and I am a fellow of the Academy of Medical Sciences.