

Neuronal Specialisation in the human brain

Roi Cohen Kadosh

University College London, UK

Understanding neuronal specialisation in the human brain is one of the great enterprises in neuroscience. Of high importance is how numerical representation is coded in the adult human brains, as it implicated different aspects including basic understating of human brain organization, its typical and atypical development, its evolutionary precursors, cognitive architectures, artificial intelligence, education, and rehabilitation. In the current talk I will examine whether: 1) numerical magnitude is represented by specialised neuronal substrates. 2) Different neuronal substrates are involved in representing numerical magnitude as a function of the format of presentation (i.e., the issue of abstract representation). I will examine these questions by presenting evidence from functional magnetic resonance adaptation, and transcranial magnetic stimulation-adaptation that provide excellent spatial resolution, thus allowing to detect that numerical representation is subserved by multiple neuronal substrates.