
Seminar

Frequency specific interactions and plasticity sculpts spontaneous correlation in the Human Cortex

Dipanjan Roy

**Max Planck Institute of Human development and
cognition, Berlin**

The relation between large-scale brain structure and function is an outstanding open problem in neuroscience. When the brain is “at rest” spatiotemporal activity patterns emerge spontaneously, that is, in the absence of an overt task. There is an increasing realization that such spontaneous spatiotemporal activity are just not random noisy fluctuations but often reflect the profile of individual a priori cognitive biases, coded as synaptic efficacies in cortical networks. Here, we hypothesize that firstly, spontaneous activity corresponds to activation pattern during typical task performance, secondly, spontaneous activity can be actively remodeled in a long-term manner by focused and intense cortical training. We provide here support to our hypothesis by presenting empirical evidence and computational modeling.

Tuesday, Sep 9th 2014

11:30 AM (Tea/Coffee at 11:15 AM)

Seminar Hall, TCIS