



# Strategic Research Theme Science of Learning

## Seminar: Measuring fundamental learning capacity of the developing brain using high-density EEG

**Title:** Measuring fundamental learning capacity of the developing brain using high-density EEG

**Speaker:** Dr. Akaysha Tang, China Program Director in the Office of International Science & Engineering, National Science Foundation (NSF) of the United States

**Date:** 16 July 2015 (Thur)

**Time:** 12:30 – 2:00 pm

**Venue:** Room 101 Runme Shaw Building



### Abstract:

Electrical signals recorded from outside of the head contain information about the brain's capacity to learn. The technical capability to derive high temporal resolution time course of neural activity from distinctive functional brain regions using EEG may offer new ways to measure an individual's fundamental learning capacity and to track how such learning capacity changes over the course of development. I will present empirical evidence to show why such a vision is feasible and what concrete steps to take in order to turn feasibility into reality. This seminar will consist of one hour of lecture and half an hour question and answers. It is designed for experienced EEG researchers who are interested in doing brain imaging using high-density EEG.

### Speaker bio:

Dr. Tang is the China Program Director in the Office of International Science & Engineering, National Science Foundation (NSF) of the United States. Prior to her current post, she served as the Program Director for Cognitive Neuroscience also at NSF. Her recent work deals with (a) enhancement of cognitive, social, emotional, and neural development in animal models and its translation to human development with focus on the role of early experience of stress; (b) development of high-density EEG based neural source imaging methods using recent signal processing tools with a focus on providing enabling tools for studying brain functions in children, elderly individuals, and patient populations.

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