

## Brain-inspired Cognitive Models and Emotional Computing

## **Professor Sen SONG**

Tsinghua Laboratory of Brain and Intelligence
Department of Biomedical Engineering
Tsinghua University

Date: June 23, 2023 (Friday) Time: 16:00 - 17:15 (HKT)

Venue: Room 750-753, Méng Wah Complex, HKU

**Chair: Professor Shelley Tong** 

**Registration:** 

https://hkuems1.hku.hk/hkuems/ec\_regform.aspx?guest=Y&ueid=88461



## Abstract:

Given the recent success of chatgpt, artificial general intelligence is again in the limelight. I will describe our recent efforts to build a large brain-inspired cognitive model. In particular, I will describe our efforts to build models that mimic human analogical thinking. It is becoming urgent to align artificial intelligence models to human values. Machines need to understand human emotions to better communicate with humans. I will describe efforts to decipher emotions from EEG recordings. I will also describe our attempts to arrive at a neuroscience of happiness, what we call neudaemonics, and its connections to education.

## About the speaker:

Sen Song works on the interface of Computational Neuroscience and Brain-inspired Artificial Intelligence. He obtained his PhD degree with Larry Abbott at Brandeis University. His PhD thesis on spike-timing-dependent plasticity now forms some of the foundation of learning in spiking networks and neuromorphic computing. He did postdoc with Dmitri Chklovskii at Cold Spring Harbor Laboratory and Sebastian Seung at MIT. During his postdoc work, he applied deep learning techniques to retinal neuron classification from two-photon microscopy images. He joined the Department of Biomedical Engineering at Tsinghua University in 2010. Recently he is working on building brain-inspired cognitive models of the brain and applying them to artificial general intelligence and applying advanced machine learning techniques to decipher brain states from EEG recordings to enable emotional computing.

