

**Title:**

Age-related differences in latent belief updating and its neural engagement.

**Speaker:**

Yu-Shiang Su 蘇煜翔 (Graduate Institute of Brain and Mind Sciences, National Taiwan University)

**Abstract:**

The causes underlying sensory inputs in the ever-changing environment are not readily observable. People infer the latent causes by integrating preconceived beliefs and evidence likelihood. If there is strong evidence on the opposite side, people will modify their beliefs and interpret things differently. This belief updating processing is fundamental for understanding why some people easily fell for fake news and misinformation, and the age effect and the neural engagement are still unknown. In this study, we developed a novel experimental task to examine how younger and older adults shifted between beliefs in volatile environments. I have two seemingly exclusive speculations on age differences: (1) older adults have rigid beliefs that are relatively reluctant to change. (2) older adults have unstable beliefs that are easily prompted. I will show and discuss the findings from behavioral responses and fMRI data to validate my speculations. These findings greatly facilitate future interventions for optimal belief updating in older adults.