

DANDRITE Topical Seminar

Monday 7 August 2023

13:00 – 14.00

Building 1870, room 816



Yong Gu

Senior Investigator, Institute of Neuroscience, Chinese Academy of Sciences

Neural mechanisms for multisensory self-motion perception

Precise spatial perception requires integration of multiple sensory cues, including visual and vestibular. To study how cross-modality signals in the brain contribute to multisensory self-motion perception, we combine psychophysics, neural recording and manipulations when macaques perform heading discrimination tasks. Our data suggest that decision-related neurons in sensory-motor association areas, including posterior parietal area, frontal area, caudate nucleus process and accumulate momentary sensory information about heading. Importantly, all areas accumulate different sensory dynamics, that is, vestibular acceleration and visual speed, suggesting that the brain uses a temporal-incongruent model for perceptual decision making across cues. Our results also suggest that the vestibular system contains rich temporal information, with different component that may contribute to different functions.

Host: Chao Sun