OIST SEMINAR

Hosted by Sensory and Behavioural Neuroscience Unit (Fukunaga Unit)

Speaker: Dr. Cindy Poo

Allen Institute for Neural Dynamics

DATE: Thursday, February 26th, 2026
TIME: 10:00 - 11:00
VENUE: Seminar Room C209, Center Building

Title:

"An odor patch foraging task to study learning and decision making"

Abstract:
Flexibility in an ever-changing world is key to survival for all organisms. Foraging decisions is a natural example of this. Animals choose between exploiting local resources or leaving to explore potentially superior places (exploitation vs exploration). We developed an ethologically grounded olfactory patch foraging task to study flexible decision-making in head-fixed mice. Thirsty mice use odors to forage for clustered and depleting water reward patches on a closed-loop multi-sensory virtual track. We show that the short acquisition time and minimal behavioral shaping allow mice to maintain behavioral flexibility, learning across multiple time scales, and adopt distinct strategies as task parameters change within single sessions. I will discuss our findings in comparison to predictions of an optimal forager by the Marginal Value Theorem. Future work will examine multi-regional neural dynamics underlying this behavior.