

Chen Institute Symposium 2023

Speaker: Kay Tye

Talk title: Neural Mechanisms of Social Homeostasis

Abstract: How does our brain rapidly determine if something is good or bad? How do we know our place within a social group? How do we know how to behave appropriately in dynamic environments with ever-changing conditions?

The Tye Lab is interested in understanding how neural circuits important for driving positive and negative motivational valence (seeking pleasure or avoiding punishment) are anatomically, genetically and functionally arranged. We study the neural mechanisms that underlie a wide range of behaviors ranging from learned to innate, including social, feeding, reward-seeking and anxiety-related behaviors. We have also become interested in “social homeostasis” -- how our brains establish a preferred set-point for social contact, and how this maintains stability within a social group. How are these circuits interconnected with one another, and how are competing mechanisms orchestrated on a neural population level? We employ optogenetic, electrophysiological, electrochemical, pharmacological and imaging approaches to probe these circuits during behavior.