



CNeuro2022 Lecture Abstracts

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Abstract 1 – Basic Lecture:

Neural Mechanisms of Decision-Making – Basic Frameworks: Signal Detection Theory and Drift-Diffusion Models

Much progress has been made in the study of the neural mechanism underlying decision-making. In this lecture, we will learn the basic frameworks used in the field. We will start with the signal detection theory and discuss how it is applied in the study of decision-making. Next, we will move on the drift-diffusion model and the related Sequential Probability Ratio Test. Finally, we will look at a few experimental applications of these frameworks.

Abstract 2 – Advanced Lecture:

Neural Network Models of Decision Making

Neural network modeling has been a powerful tool for us to understand how the brain works. Here, we will look at several popular neural network models in the study of decision making. We will learn how they are constructed or trained and how they can account for many experimental findings of both the behavior and the neural activity pattern during decision-making.