

Abstract:

The lab is broadly interested in the field of neuroscience, especially insofar as it addresses the questions of **learning and memory**. Learning is thought to change the connections between the neurons in the brain, a process called synaptic plasticity. Using **mathematical** and **computational** tools, we model **synaptic plasticity** across different time scales that reproduces experimental findings. We then study the role of synaptic plasticity, by constructing **networks** of artificial neurons with plastic synapses.