

Neural Representation and Modulation of Pain in Humans

Abstract

Pain is an unpleasant sensory and emotional experience that serves as a protective mechanism against actual or potential harm. However, persistent chronic pain can disrupt bodily functions and lead to various complications, significantly impacting individuals' quality of life. Understanding the neural encoding patterns of pain and developing targeted modulation strategies are crucial for assessing and alleviating pain.

In this talk, Professor Tu will present research findings from his laboratory regarding the neural representations and neuromodulations of pain in humans, focusing on the ascending and descending pain pathways. His investigations involve a combination of cognitive-behavioral paradigms, brain imaging techniques, neuromodulation approaches, and machine learning methods.