

Packet-like organization of neuronal activity

Abstract

Either spontaneously or in response to stimuli, neurons are active in a coordinated fashion. For example, an onset response to sensory stimuli usually evokes a 50-200ms long packet of population activity. Such packets are ubiquitous feature of stimulus evoked and spontaneous network activity, and are present across different brain states. Although these packets have a generally conserved sequential spiking structure, the exact timing and number of spikes fired by each neuron within a packet can be modified depending on the stimuli. I will discuss how the packet-like organization of neuronal activity may provide an explanation for multiple puzzling observations about neuronal coding.