

Title: "Spikes"

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Abstract:

Most communication in the brain is via spikes. While we understand the spike-generation mechanism of individual neurons, we fail to appreciate the spike-timing code and its role in neural computations. The speaker starts with simple models of neuronal spiking and bursting, describes small neuronal circuits that learn spike-timing code via spike-timing dependent plasticity (STDP), and finishes with biologically detailed and anatomically accurate large-scale brain models.