Attentional Gain and Synchrony

Terrence Sejnowski

Howard Hughes Medical Institute
The Salk Institute
University of California, San Diego

Brains are never at rest. Even in the absence of sensory stimuli, neurons are spontaneously active and can fire coherently. Experiments and models suggest that these coherent patterns are modulated by top-down influences that allow us to expect, attend and flexibly respond. In particular, the inhibitory interneurons in the cortex may control the degree of synchrony in a cortical column and thereby control the gain of the signals represented by this population of neurons.