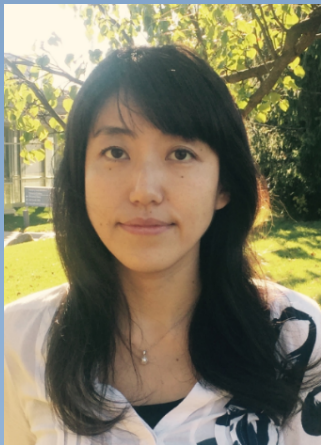


99th WPI IIS Seminar

The role of thalamic matrix cells in wake/sleep cycle regulation

The neocortex and the thalamus are reciprocally connected and are believed to be critical for arousal and cognitive function. In a patient in the minimally conscious state, bilateral electrical stimulation of the central thalamus improved behavioral responsiveness. Functional human brain imaging showed that certain regions, including thalamus, are consistently more deactivated than other regions during sleep, suggesting a role of thalamus in arousal. In thalamus, there are two neural subpopulations which are defined by their projection patterns. "Core cells", which project to specific sensory cortex and relay information from periphery, and "matrix cells", which project to widespread cortical areas, and whose function remains unknown. Our results show that thalamic matrix cells play an important role in the regulation of wake/sleep cycle.



Speaker:

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Department of Psychiatry,
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Date: Tuesday, December 27, 2016

Time: 11:00 - 12:00

**Venue: 1F Auditorium, IIS Building
University of Tsukuba**



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