

# 61<sup>st</sup> WPI IIS Seminar

## “New Excitatory Input from the Entorhinal Cortex into the Hippocampus”

In humans and animals, episodic memory requires the concerted association of objects, space and time coordinated by the entorhinal cortex (EC)-hippocampal (HPC) network. While the encoding of space and object associations in this network have been well explored, our understanding of the time-related aspect of episodic memory is only very recently coming to light. For instance, the input from medial EC layer III cells to CA1 pyramidal cells is important for the temporal association of discontinuous events. Most cognitive and motor phenomena temporal association memory must be regulated for optimal adaptive benefit. However, virtually nothing is known about the underlying mechanisms of this regulation. In my talk, I will provide the next major step by 1) mapping and 2) characterizing an unsuspected neuronal circuit within the EC-HPC network and 3) examining the effect of its optogenetic manipulations on a temporal association memory and finally 4) monitoring the cell type-specific neuronal activities by using a miniature head-mounted fluorescence microscope.



Speaker: Dr. Takashi Kitamura

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**Date:** Friday, July 24, 2015

**Time:** 12:00-13:00

**Venue:** Room #402, 4F, Health and Medical Science Innovation  
Laboratory, University of Tsukuba

★Light refreshments will be served.



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