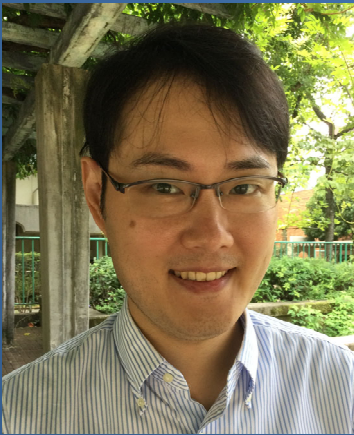


226th WPI-IIIS Seminar

The role of synaptic plasticity in memory consolidation during sleep

It has long been known that sleep is important for memory, and elucidating the cellular mechanisms involved is of great scientific and social significance. We focus on synaptic plasticity, a cellular phenomenon of memory, to investigate the mechanisms by which episodic memories are consolidated during sleep in the mouse. Long-term potentiation (LTP) is a representative phenomenon of synaptic plasticity, and we have recently developed a method to specifically cancel LTP by light irradiation. Using this method, we have shown that LTP events occur in the hippocampus and anterior cingulate cortex during post-learning sleep and are important for memory consolidation. I will also introduce ongoing projects on long-term recording of cellular activity during post-learning sleep using Arc-dVenus and FRET imaging.



Dr. Akihiro Goto

Hakubi Center for Advanced Research,
Kyoto University

Date: **Wednesday, May 28, 2025**

Time: **13:00 – 14:00**

Venue: **1F Auditorium, IIIS Building**

*** On-site participation only**



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