



Invitation

**2018. 3. 9 (Friday, this week)**  
**15:30-16:30**

Speaker: **Prof. Thomas Blanpied**

Department of Physiology  
University of Maryland, School of Medicine

Title: **Nanostructure and alignment control  
function of single synapses**

Prof. Blanpied and his colleagues revealed that, in the presynapse, evoked fusion occurs in a confined subregion of the active zone where the density of a structural protein RIM is highest. Furthermore, they found that, using both hippocampal neurons in culture and in brain slices, the distributions of RIM in the presynapse and neurotransmitter receptors, AMPA and NMDA receptors, in the post synapse are highly co-aligned across the synaptic cleft in the nanometer scale. Pharmacological evidence they obtained suggests that the dense and dynamic spine actin skeleton plays a key role in trans-synaptic nanoscale alignment by way of presynaptic RIM and postsynaptic PSD-95. Prof. Blanpied will discuss these findings and their implications.

Venue: **OIST Central Building Room C209**

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