



## Postsynaptic nanoblocks in excitatory synapses for transcellular alignment

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Nanoscale organization of proteins within synapses is critical for maintaining and regulating synaptic transmission and plasticity. My laboratory use cryogenic electron tomography to directly visualize in situ the three-dimensional architecture and supramolecular organization of transsynaptic alignments in their native cellular context in neurons. To localize and identify specific molecules or subunits in the highly crowded cellular environment, we are developing widely adaptable and genetically encoded electron microscopy (EM) labels for in situ molecular-resolution cellular imaging, which is analogous to the green fluorescent protein used in fluorescence microscopy. The application of the EM-visible labels across different fields of biology will provide a universally applicable approach for directly localizing specific molecules and observing the molecular architecture in cellular environment at molecular-resolution (1-2 nm).

**June 01, 2023, 03:30 p.m.**

Epileptology, Seminar Room 266/83, Ground Floor



If you would like to meet with the speaker, please contact:

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