It is our pleasure to invite you to the following seminar on:

**Wednesday February 19th, 2020 – 11:00 am– BSP 231, Cubotron**

**Optical modulation of membrane protein function in living samples**

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In multicellular organisms, living cells cooperate with each other to exert coordinated complex functions by responding to extracellular chemical or physical stimuli via proteins on the plasma membrane. Conventionally, chemical or physical signal transduction have been investigated by chemical, genetic, or physical perturbation; however, these methods cannot manipulate biomolecular reactions at high spatio-temporal resolution, or provide molecular information. Here, I present optogenetic systems that enable functional modulation of receptor protein activities with external light. The system enabled spatiotemporal modulation of various biological phenomena, such as axon guidance and cell-cell tension transfer.