

CMP Seminar

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Quantum Dynamics Controlled by Light

Lightwave acceleration of supercurrents charts a path forward for the electromagnetic design of emergent phases and collective modes for quantum engineering and sensing applications. In this talk, I will discuss our recent progress towards applying this new tuning knob, enabled by using single- and few-cycle THz pulses, to reveal some distinguishing features of driven quantum systems: Anderson pseudo-spin precessions and higher harmonics forbidden by equilibrium symmetry, gapless state with coherent transport hidden underneath superconductivity, Higgs modes controlled by light. We will also discuss how to extend such THz light-driven coherence and dynamic symmetry breaking to topological quantum systems.

Monday, March 16th, 2020 at 4:10 p.m.
Room: 1400 BPS Bldg.
Host: Chong-Yu Ruan