



Friday, April 8th, 2022 – 02:30 pm

CFEL Seminar room I, II & III (Bldg. 99) and on Zoom*

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Quantum optics meets correlated electrons

Given tremendous progress in controlling individual photons and other excitations such as spin, excitonic, phononic in solid-state systems, it is intriguing to explore whether these quantum optical control techniques could pave a radically new way to prepare, manipulate, and detect non-local and correlated electronic states.

In this talk, I discuss several theoretical ideas : (1) Floquet engineering of band structures and effective interaction, both in the context of topological physics and superconductivity, (2) Enhancing superconductivity through light-matter coupling: using an optical drive, an empty cavity or squeezed drive, (3) Formation of excitons in Mott insulators and their magnetic properties.

Host: Ángel Rubio, Andrea Cavalleri

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<https://www.mpsd.mpg.de/events/30649/17056>

