Contribution ID: **361** Type: **Talk**

【712】Nonequilibrium Dynamics of Collective Excitations in Quantum Materials

Thursday 29 August 2019 17:30 (30 minutes)

Revealing the dynamics of collective excitations (e.g. excitons, phonons, plasmons, magnons···) in quantum materials is a central topic in condensed matter physics, as collectivity lies at the origin of several cooperative phenomena that lead to profound transformations, instabilities and phase transitions. Here, we will explore the dynamics of such collective excitations from the perspective of ultrafast science, presenting novel spectroscopic methods that can track the real-time evolution and the interactions of distinct collective modes. Special emphasis will be given to the rising fields of excitonics and phononics in materials governed by strong interactions and correlations.

Authors: Dr BALDINI, Eduardo (EPFL); Prof. CARBONE, Fabrizio (EPFL); Prof. CHERGUI, Majed (EPFL)

Presenter: Dr BALDINI, Eduardo (EPFL)

Session Classification: Quantum Beam Science: bio, materials and fundamental physics with neutrons and X-rays