Chez Pierre

Presents ...

Monday, September 10, 2018

12:00pm Noon

MIT Room 4-331

Chez Pierre Seminar

Achim Rosch – University of Cologne

"Activating many-body localization in solids by driving with light"

Due to the presence of phonons, many body localization (MBL) does not occur in disordered solids, even if disorder is strong. Local conservation laws characterizing an underlying MBL phase decay due to the coupling to phonons. We show [1] that this decay can be compensated when the system is driven out of equilibrium. The resulting variations of the local temperature provide characteristic fingerprints of an underlying MBL phase. Using exact diagonalization and analytic arguments we show how one can use local temperature variations to extract critical properties of the MBL transition.

[1] Zala Lenarčič, Ehud Altman, Achim Rosch, arXiv:1806.04772