

Georg H. Endress Research Seminar Announcement

Speaker: Dr. Junichi Okamoto (GHE Fellow at the Albert-Ludwigs-University in Freiburg)

Date: Thursday, November 26th, 2020

Time: 2 pm

Location: Online, [zoom link](#)
Meeting ID: 968 5793 1809
Passcode: 686607

Title: Numerical time-dependent spectroscopy on the optically excited Mott-Hubbard cluster

Abstract:

Recent pump-probe experiments have uncovered a variety of intriguing dynamics in strongly correlated materials such as ultrafast structural transitions in transition metal dichalcogenides. The key feature of these experiments is the time-dependent spectroscopic information. In this talk, I will discuss the time-evolution of various spectroscopic observables in optically excited Mott-Hubbard models. By numerically exact simulations of finite Hubbard clusters, we find that continuous resonant excitation can lead to a prethermal Floquet state with Rabi oscillations for weak field amplitudes [1]. For strong and short excitation, multi-photon excited states show second harmonic oscillations in time-dependent optical conductivity [2].

[1] arXiv:2010.00326

[2] New J. Phys. 21, 123040 (2019)