

Non-equilibrium dynamics of strongly interacting ultracold atoms

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Ultracold atoms provide a fascinating playground to investigate strongly interacting many-body systems in a controlled way. These systems provide a window into the non-equilibrium dynamics of strongly interacting systems which is not accessible in usual condensed matter experiments. In this talk, I will discuss two different types of dynamics:

- (a) The decay of a highly excited state (double occupancy) in a Fermi Hubbard model on optical lattices and
- (b) The growth of magnetic and pairing domains in a Fermi gas after a quench of the effective interaction.