



Wednesday, April 18<sup>th</sup>, 2018 – 11:00 a.m.  
CFEL Seminar room IV (Bldg. 99)

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## Resonant Thermalization of periodically driven strongly correlated electrons

We study the dynamics of the Fermi-Hubbard model driven by a time-periodic modulation of the interaction within nonequilibrium Dynamical Mean-Field Theory. For moderate interaction, we find clear evidence of thermalization to a genuine infinite-temperature state with no residual oscillations. Quite differently, in the strongly correlated regime, we find a quasi-stationary extremely long-lived state with oscillations synchronized with the drive (Floquet prethermalization). Remarkably, the nature of this state dramatically changes upon tuning the drive frequency. In particular, we show the existence of a critical frequency at which the system rapidly thermalizes despite the large interaction. We characterize this resonant thermalization and provide an analytical understanding in terms of a break down of the periodic Schrieffer-Wolff transformation.

Host: Angel Rubio

