

Eugene Demler, Harvard University

Nonequilibrium Quantum Dynamics: From Resonant Xray Scattering in Solids to Ultracold Atoms

Many new experimental techniques in condensed matter physics go beyond the paradigm of linear response measurements. I will use example of resonant Xray scattering in high T_c cuprates to demonstrate how new insights into experimental results can be gained by considering their nonequilibrium aspects. I will also discuss on-going experiments with ultracold atoms that can help address open problems of quantum dynamics of many-body fermionic systems.