Joint Theory Seminar

European XFEL, CFEL & Prof. Lichtenstein's Group at University of Hamburg

Thursday, 20 January 2022, 16:00 – 17:00

Prof. Jim Freericks

Department of Physics, Georgetown University, Washington (DC)

In this talk, I will spend time discussing how one can perform ultrafast measurements of temperature (more precisely, the energy content) of nonequilibrium systems on an ultrafast time scale. This work focuses on either combining observations from two different probes (say photoemission and electronic Raman scattering) or from single probes that are sensitive to the approximate temperature (core x-ray photoelectron spectroscopy or x-ray absorption spectroscopy). I will also describe how these systems relax toward equilibrium after the pump is over. Our latest results on electron-phonon coupled systems provide interesting new insights into how the phonon dynamics inter-relate with the electron dynamics, especially with regards to the fluence dependence of the system. If time allows, I will also discuss how quantum computers may enable the next generation of breakthroughs in theoretical nonequilibrium physics.

Hosts: Alexander Lichtenstein and Nils Brouwer

Zoom link:

https://xfel.zoom.us/j/97938618663?pwd=WE5FYmtFZGxqTkIrT3JIb1pyY05OUT09

Meeting ID: 979 3861 8663
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