

# Joint CQSE and CASTS Seminar

Weekly Seminar  
Sep. 23, 2016 (Friday)

TIME Sep. 23, 2016, 14:30 ~ 15:30  
TITLE Time-dependent transport of electrons through nanosystems in a photon cavity  
SPEAKER Prof. Vidar Gudmundsson  
Science Institute, University of Iceland  
PLACE Rm716, CCMS & New Physics Building, NTU

## Abstract

In the talk we show how the transport of interacting electrons through a nano scale semiconductor system in a photon cavity can be described on all relevant time scales using a quantum master equation in Fock-space for the transient regime, and in Liouville-space for the long time to steady state regime.

As we pay special attention to the geometry of the system and the description of all interactions we observe how the transport can cause collective oscillations in the system, and how Rabi-oscillations can be detected in the current.

