

Beyond linear response: an Ohm's law for quantum Hall currents

Speaker: Stefan Teufel - University of Tübingen

Time: Wednesday April 29, 13:00-14:00

Location: Room B308, Largo S. Murialdo 1 (Roma)

I will present a recent result that establishes a form of Ohm's law for the quantum Hall current in models of interacting fermions on a lattice at zero temperature. I will focus on two novel aspects: defining the Hall current properly in order to go beyond linear response calculations and computing this current to all orders in perturbation theory. These two aspects are both based on the concept of non-equilibrium almost stationary states, a form of 'many-body resonance' for infinite-volume quantum system.