

Séminaire de physique statistique

Lundi 20/02/2017, 14h00-15h00

Orme des Merisiers Salle Claude Itzykson, Bât. 774

Lindblad master equations as a tool to study many-body physics

Marko Znidaric

University of Ljubljana

In recent years quantum master equations of the Lindblad type are receiving increased attention in different fields of physics. In quantum information they are seen as a resource that can be used to perform quantum operations, in statistical physics they form a well defined setting for nonequilibrium physics, while in condensed matter they can be used simply as a tool with which one can probe system's properties. I will first review basics of the Lindblad setting and then present some concrete results about steady states of many-body systems, with a particular emphasis on quantum transport in low-dimensional systems. Results will be presented for the Heisenberg chain with and without disorder.
