« Atelier sur l'information quantique et mécanique statistique quantique » 15 au 19 octobre 2018

"Workshop on Quantum Information and Quantum Statistical Mechanics"

October 15-19, 2018

Lieb-Robinson bounds and the spectral flow

Robert Sims *

rsims@math.arizona.edu

This talk will review locality estimates for quantum lattice systems which are generally referred to as Lieb-Robinson bounds. As an application, various properties of the spectral flow, also known as 'quasi-adiabatic evolution', will be discussed. Here the spectral flow is a carefully chosen automorphism which has been useful in a number of recent application; most notably a proof of stability of the spectral gap for a large class of models.

^{*}Department of Mathematics, University of Arizona, 617 N. Santa Rita Avenue, Tucson, AZ 85721, USA