

1106-81-406

Carlos F. Lardizabal* (cfelipe@mat.ufrgs.br), Instituto de Matemática - UFRGS,
Universidade Federal do Rio Grande do Sul, Av. Bento Gonçalves 9500, Porto Alegre, RS
91509-900, Brazil. *Open quantum random walks and the recurrence problem*. Preliminary report.

In this seminar we discuss a model of open quantum random walk on \mathbb{Z} , and there we examine a notion of quantum recurrence. Combining some classical and quantum ideas, one can also analyze positive recurrence. The calculation of probabilities is typically noncommutative (via trace functionals), but globally the walk presents certain classical properties. We briefly discuss nonhomogeneous Markov chains associated to this kind of walk. Part of this presentation is related to joint work with Rafael Rigão Souza (UFRGS). (Received August 27, 2014)