

# Open quantum random walks and the recurrence problem

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## **Abstract**

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 non-commutative (via trace functionals), but globally the walk presents certain classical properties. Joint work with Rafael Rigão Souza (UFRGS).