

Séminaire de Probabilités et Statistique

Mardi 19 juin à 14h00

Laboratoire Dieudonné

Salle de conférences

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Sapienza)**

Critical path analysis and Mott variable range hopping

Mott variable range hopping is a fundamental mechanism in electron transport in strongly disordered systems. It can be studied via a random walk with long jumps on a marked simple point process (now called Mott's random walk), and also by means of the so called Miller-Abrahams random resistor network. We will present results concerning the anomalous decay of the conductivity at low temperature, as predicted by Mott's law. In particular, we will give a percolative characterisation of the leading term of the log conductivity at low temperature, by a critical path analysis approach.