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**Limit theorems for the capacity of the range of stable random walks**

**Abstract**

The range of a random walk is the (random) set of points visited by the random walk up to a given time point. Studies on the range of random walks on the integer lattice has a long and fascinating history. During my talk I will briefly discuss the main results concerning the cardinality of the range and next I will focus on the capacity of the range. I will present a central limit theorem for the capacity of the range for a class of random walks which belong to the domain of attraction of stable laws. Further, I will show how to obtain the functional central limit theorem in the Skorohod space and finally I shall pose a few open questions and propose some new directions.