How groups grow

Abstract:
Given a Cayley graph of a finitely generated group, one can consider its growth function which counts how many elements are there in a ball of radius \( n \) on the graph. We will discuss two seminal results in the subject of growth of groups proved in early 1980s: Gromov’s polynomial growth theorem and Grigorchuks construction of groups of intermediate growth. We will illustrate how random walks on the Cayley graphs can help to study growth.

Host: Jon Novak

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