

How generic are thin groups?

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In recent years, there have been great advances in understanding families of graphs that are expanders. For example, given a finitely generated subgroup G of $GL_n(\mathbb{Z})$, Salehi-Golsefidy-Varju give necessary and sufficient conditions for the family of graphs associated to finite quotients of G to be an expander family. These results have found unexpected applications in number theory. Their most interesting applications involve groups which are thin, or of infinite index in their Zariski closure. It is therefore of interest to understand how generic such a group is, where generic can be interpreted in several ways. In this talk we will discuss how one might interpret "generic" as well as our approach to this question.

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