

Expander Graphs, Thin Groups and Super-strong Approximation

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Abstract: After introducing expander graphs and briefly discussing Lubotzky-Weiss Independence Problem for groups and expanders I will talk about recent developments pertaining to establishing the expansion property for congruence quotients of thin groups – discrete subgroups of semisimple groups which are Zariski dense but of infinite index. This expansion property can be viewed as a far-reaching generalization of the strong approximation theorem and has many applications, in particular to affine linear sieve.