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Alireza Salehi Golsefidy* (golsefidy@ucsd.edu). *Expansion properties of linear groups.*

Starting with a finite (symmetric) subset Ω of $\mathrm{SL}_n(\mathbb{Q})$, one can consider the group Γ generated by Ω and the Cayley graphs $\mathrm{Cay}(\Omega, q)$ of $\pi_q(\Gamma)$ with respect to $\pi_q(\Omega)$, where π_q is the residue map modulo q . In this talk, I will address the following question that under what conditions $\{\mathrm{Cay}(\Omega, q)\}$ forms a family of expander graphs as q runs through elements of various subsets of the positive integers. (Received September 24, 2012)