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Finiteness of actions by higher-rank lattices

For $n \geq 3$, consider a lattice subgroup Γ of $\mathrm{SL}(n, \mathbb{R})$ and a smooth action of Γ on a compact manifold M . With D. Fisher, S. Hurtado, and D. W. Morris, we show that all such actions are finite when $\dim(M) \leq n - 2$. This extends previous results with D. Fisher and S. Hurtado on actions of cocompact lattices. I will give some history and motivation for the problem and briefly explain some tools used in the proof.