

ABSTRACT:

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Proper affine actions of right angled Coxeter groups

We prove that any right-angled Coxeter group on k generators admits a proper action by affine transformations on $\mathbb{R}^{k(k-1)/2}$. As a corollary, many interesting groups admit proper affine actions including surface groups, hyperbolic three-manifold groups, and Gromov hyperbolic groups of arbitrarily large virtual cohomological dimension. Joint work with Francois Gueritaud and Fanny Kassel.