

GEOMETRIC AND ASYMPTOTIC GROUP THEORY  
WITH APPLICATIONS  
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*Hyperbolic groups acting improperly*

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*Abstract:*

Suppose that a hyperbolic group  $G$  acts cocompactly on a CAT(0) cube complex, and that vertex stabilizers are quasiconvex and virtually special. Then  $G$  is virtually special. In case vertex stabilizers are finite, this is a result of Agol, and in case the cube complex is a tree it is a result of Wise. I will discuss the ingredients of the proof of this result. This is joint work with Jason Manning.