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*Coherence and Negative Sectional Curvature in Complexes of Groups*

A group is coherent if finitely generated subgroups are finitely presented. We examine a condition on a simply connected 2-complex  $X$  ensuring that if a group  $G$  acts properly on  $X$  then  $G$  is coherent. This extends earlier work of D. Wise on 2-complexes with negative sectional curvature in the case that  $G$  acts freely. Our extension of this result involves a generalization of the notion of combinatorial sectional curvature, a version of the combinatorial Gauss-Bonnet theorem to complexes of groups, and requires the use of  $\ell^2$ -Betti numbers. This is joint work with D. Wise, McGill U.