

Meeting: 999, Nashville, Tennessee, SS 5A, Special Session on Topological Aspects of Group Theory

999-20-287 **Tadeusz Januszkiewicz*** (tjan@math.ohio-state.edu) and **Jacek Swiatkowski**. *More on simplicial nonpositive curvature*. Preliminary report.

We define and study a combinatorial condition on a simplicial complex which neither implies nor is implied by CAT0 property of the geodesic metric on the complex, but which does have many consequences of CAT0 condition. In this talk I will concentrate on filling properties of spheres in universal coverings of such spaces. In particular I will show that fundamental groups of smooth riemannian manifolds of dimension at least 3 are not subgroups of fundamental groups of spaces with simplicial nonpositive curvature. (Received August 26, 2004)