

1135-57-635

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Obstructions to Riemannian smoothings of a locally CAT(0) manifold.

In this talk I will discuss obstructions to Riemannian smoothings of a locally CAT(0) manifold. I will focus on obstructions in dimension = 4 given by Davis-Januszkiewicz-Lafont and show how their methods can be extended to construct more examples of locally CAT(0) 4-manifolds M that do not support Riemannian metric with non-positive sectional curvature. Further, the universal cover of such a manifold, \tilde{M} , satisfies the isolated flats condition and contains a collection of 2-dimensional flats with the property that their boundaries at infinity form non-trivial links in $\partial^\infty \tilde{M}$. (Received September 11, 2017)