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Bakul Sathaye* (sathaye.2@osu.edu). *Obstructions to Riemannian smoothings of locally CAT(0) manifolds.*

In this talk I will focus on obstructions in dimension = 4 to Riemannian smoothings of a locally CAT(0) manifold. I will discuss the obstruction 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. Universal covers of the manifolds we construct satisfy the isolated flats condition and contain a collection of 2-dimensional flats with the property that their boundaries at infinity form non-trivial links in the boundary 3-sphere. (Received February 12, 2018)