

1145-57-1973 **Bakul Sathaye*** (sathaybv@wfu.edu). *Obstructions to Riemannian smoothings of locally CAT(0) manifolds.*

In this talk I will discuss obstructions to having a smooth Riemannian metric with non-positive sectional curvature on a locally CAT(0) manifold. I will focus on the obstruction in dimension = 4 given by Davis-Januszkiewicz-Lafont and show how their method can be extended to construct more examples of locally CAT(0) 4-manifolds that do not have a Riemannian smoothing. The universal covers of these manifolds 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 September 24, 2018)