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Spaces of riemannian metrics satisfying surgery stable curvature conditions

Thursday, November 8, 2018 10:40 AM (50 minutes)

We will introduce spaces of riemannian metrics on a smooth manifold satisfying a curvature condition given by a subset in the space of algebraic curvature operators. Provided this condition is surgery stable, which is a notion based on the work of S. Hoelzel guaranteeing the condition can be preserved under surgeries of a certain codimension, we can generalize several theorems from positive scalar curvature geometry to this setting. Notably, we will comment on a generalization of a theorem of V. Chernysh on the homotopy type of the space of psc metrics and point to cases where we can distinguish connected components using invariants from spin geometry.

Summary

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