

Oberseminar Topologie: 06.05.2019

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„Curvature conditions and spaces of riemannian metrics.“

Abstract:

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. In this context we will comment on notions that lead to generalizations of theorems from positive scalar curvature (psc) geometry such as Chernysh's theorem on the invariance of the homotopy type of the space of psc metrics under certain surgeries. Finally, we will contrast these results with what is known for spaces and moduli spaces of metrics satisfying stronger curvature conditions, e.g. positive Ricci curvature.