

Graduate Student Seminar

Speaker: Corbett Redden

In mathematics, one often wants to know what kinds of geometry can be put on a manifold. Specifically, when can a manifold be positively curved? We will see that if the manifold has a spin structure, then an interesting blend of topology and analysis (index theory) gives a very useful obstruction to positive scalar curvature metrics. We will then discuss an analogous situation when the manifold has a string structure. In this case, there is a conjectured obstruction to having positive Ricci curvature. I will not be assuming any knowledge of the words in this abstract (except mathematics).