

Solutions of the Yamabe problem on noncompact manifolds via squeezing

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The Yamabe problem on noncompact manifolds asks for a complete metric with constant scalar curvature in a given conformal class. Unlike its compact counterpart, this problem may have no solutions. In this talk I will discuss a multiplicity result in manifolds that are conformally equivalent to products $M \times S$, where M is a compact manifold with positive scalar curvature, and S is either the hyperbolic or the Euclidean space. The desired solutions are obtained by "squeezing" some compact quotients of $M \times S$.