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Title: Infinitely many solutions to the Yamabe problem on noncompact manifolds

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Abstract: I will discuss the existence of infinitely many complete metrics with constant positive scalar curvature on prescribed conformal classes on certain noncompact product manifolds. These include products of closed manifolds with constant positive scalar curvature and simply-connected symmetric spaces of noncompact or Euclidean type; in particular, $S^m \times \mathbb{R}^d$ and $S^m \times \mathcal{H}^d$. As a consequence, one obtains infinitely many periodic solutions to the singular Yamabe problem on $S^m \setminus S^k$, for all $0 \leq k < (m-2)/2$. I will also show that all Bieberbach groups are periods of bifurcating branches of solutions to the Yamabe problem on $S^m \times \mathbb{R}^d$. This is a joint work with R. Bettiol, UPenn.