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**Bradley Lewis Burdick\***, bburdick@ucr.edu. *The space of positive Ricci curvature metrics on spin manifolds.* Preliminary report.

The space of positive scalar curvature metrics on a spin manifold of dimension  $4k - 1 \geq 7$  has infinitely many path components provided it admits a single psc metric. This was first observed by Carr for homotopy spheres bounding stably parallelizable manifolds. All other psc spin manifolds inherit these path components under the psc connected sum of Gromov-Lawson. Using his own Ricci-positive version of Carr's construction, Wraith was able to show that the space of positive Ricci curvature metrics on homotopy spheres also has infinitely many path components. In our previous work we explored how a construction of Perelman can be used to take Ricci-positive connected sums. In this talk we will describe how to combine all of these ideas to show that the space of positive Ricci curvature metrics on a spin manifold of dimension  $4k - 1 \geq 7$  has infinitely many path components provided it admits a very particular kind of positive Ricci curvature metric. In particular, we have previously shown that products of spheres and projective spaces admit such metrics. (Received February 14, 2021)