Existence of infinitely many minimal hypersurfaces in positive Ricci curvature

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Abstract. In the early 1980s, S. T. Yau conjectured that any compact Riemannian three-manifold admits an infinite number of closed immersed minimal surfaces. In this talk I will describe joint work with André Neves, in which we use min-max theory for the area functional to prove this conjecture in the positive Ricci curvature setting. More precisely, we show that every compact Riemannian manifold with positive Ricci curvature and dimension at most seven contains infinitely many smooth, closed, embedded minimal hypersurfaces.