Positive sectional curvature and Ricci flow

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The preservation of positive curvature conditions under the Ricci flow has been an important ingredient in applications of the flow to solving problems in geometry and topology. Works by Hamilton and others established that certain positive curvature conditions are preserved under the flow, culminating in Wilking's unified, Lie algebraic approach to proving invariance of positive curvature conditions. Yet, some questions remain. In this talk, we describe $\sec > 0$ metrics on S^4 and $\mathbb{C}P^2$, which evolve under the Ricci flow to metrics with sectional curvature of mixed sign. This is joint work with Renato Bettiol.