

Kahler Ricci flow on Fano manifolds

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This is the joint work with Xiuxiong Chen. We define a tamed condition for Kahler Ricci flow on Fano manifolds. If a flow is tamed and the local alpha invariants of the underlying manifold is big, then the flow must converge to a Kahler Einstein metric exponentially fast. The local alpha invariants are algebraic invariants which can be calculated explicitly by algebraic geometry method. Therefore by showing the tamedness condition, we give a new method to find Kahler Einstein metrics. As an application, we show that every two dimensional Kahler Ricci flow is tamed. By calculating the local alpha invariants, we reprove Tian's theorem of Kahler Einstein metrics on Fano surfaces.