

On coupled flows with mean curvature flows and Ricci flows

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A mean curvature flow is a negative backward gradient flow of the volume functional. Huisken proved that when a mean curvature flow develops singularities called type I, its parabolic rescaling converges to a self-similar solution. In this talk, I will give a generalization of this blow-up analysis to a Ricci-mean curvature flow, which is a coupled equation of a Ricci flow and a mean curvature flow. I start with a brief introduction of mean curvature flows. Next, I will introduce Ricci flows. Finally, I will give a main theorem.