

Abstract: Some of the most important problems in PDE are related to the understanding of singularities. This usually happens through a blow up procedure near the potential singularity which uses the scaling properties of the equation. In the case of a parabolic equation the blow up analysis often leads to special solutions which are defined for all time $-\infty < t \leq T$, for some $T \leq +\infty$. We refer to them as *ancient* solutions.

In this lecture we will discuss Uniqueness Theorems for ancient compact solutions to the *Ricci flow* and *Mean curvature flow*.