Brett L Kotschwar* (kotschwar@asu.edu) and Lu Wang (luwang@math.wisc.edu).

Asymptotic rigidity of noncompact shrinking gradient Ricci solitons.

Shrinking gradient Ricci solitons are generalized fixed points of the Ricci flow equation and models for the geometry of a solution in the vicinity of a developing singularity. At present, all known examples of complete noncompact shrinkers are either asymptotic to a regular cone at infinity or are locally reducible as products, and growing evidence suggests that in four-dimensions these may be the only possible asymptotic geometries. I will discuss some recent uniqueness results obtained in part with Lu Wang which demonstrate that a shrinking soliton which is smoothly asymptotic to a cone or to a generalized cylinder along some end in an appropriate sense is essentially uniquely determined by its asymptotic geometry. (Received July 22, 2017)