

Meeting: 1001, Evanston, Illinois, SS 7A, Special Session on Geometric Partial Differential Equations

1001-53-236 **Sigurd B Angenent***, Math Department, UW MAdison, Madison, WI 53706. *Asymptotics of neckpinching in Ricci flow.*

I will present joint work with Dan Knopf, in which we study the precise asymptotics of the "neck pinch singularity" in Ricci flow. Although this singularity was widely believed to exist, no know examples existed before 2002 when Miles Simon exhibited a noncompact manifold with a Ricci-flow neck pinch. Knopf and I have constructed similar examples which are compact and provided a detailed analysis of the singularity. The example can be used to show that various pinching inequalities are sharp. (Received August 27, 2004)