# Analysis and Differential Geometry Seminar

## *Ricci solitons and warped product Einstein metrics.*

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**Abstract:** One of the fundamental questions in geometry is, given a space what is the "best" geometry we can put on it? In the context of Riemannian geometry, the Ricci flow is a tool that has produced a number of exciting recent breakthroughs in understanding this basic question. Ricci solitons appear prominently in some of these developments as singularity models for the flow and as natural new candidates for optimal geometries. On the other hand, gradient Ricci solitons also have a natural interpretation in terms of Riemannian manifolds with measure. In this talk we will explore this second perspective and discuss some recent classification results that have arisen from this viewpoint.. A natural connection between gradient Ricci solitons and warped product Einstein metrics also arises and we will discuss some recent developments in understanding this connection.

Tuesday, February 8, 2011, 4:00 pm
Mathematics and Science Center: W301

# Mathematics and Computer Science
# Emory University