1125-37-1541 **James E Reid*** (jamesreid2@my.unt.edu), Denton, TX 76201. *Packing measure of super separated iterated function systems.*

In the context of fractal geometry, the natural extension of volume in $\mathbb{R}^d$ to include fractal sets is given by Hausdorff and packing measures. If J is the limit set of an iterated function system (IFS) in $\mathbb{R}^d$ satisfying the open set condition, then J is often a fractal set. It is well known that the h-dimensional packing measure of J is positive and finite when h is given by Hutchinson's formula. Feng was able to find exact formulas for the h-dimensional packing measure for a large class of Cantor sets in the interval $[0, 1]$.

In this talk, we will introduce the super separation condition for an IFS. We use super separation to reduce the problem of computing the h-dimensional packing measure to checking densities of a finite number of balls around each point in the limit set. We then use this fact to find formulas for the packing measure of a class of Cantor sets in $\mathbb{R}$ (extending Feng's result), a class of fractals based on regular convex polygons in $\mathbb{R}^2$, and a class of fractals based on regular simplexes in $\mathbb{R}^d$ for $d \geq 3$. (Received September 17, 2016)