TEXAS STATE UNIVERSITY

The rising STAR *of Texas*

Differential Equations and Applied Math Seminar

Dr. Ray Treinen, Texas State University

11am-12pm September 29th, 2017

333 Derrick Hall

Title: Γ-convergence topics III

Abstract: We continue our study of integral problems on Lebesgue spaces. We first prove the following result. Let $F : L^p(a,b) \to [0,\infty]$ be of the form $F(u) = \int_a^b f(u)\,dt$, where $f : \mathbb{R} \to [0,\infty]$ is a Borel function. Then, F is weakly lower semicontinuous in $L^p(a,b)$ if and only if f is lower semicontinuous and convex.

In any remaining time, we will discuss relaxation of L^p spaces by the use of the convex and lower semicontinuous envelope.
We are mostly following the book by Andrea Braides.

Interested faculty and graduate students are encouraged to attend.