



## Differential Equations and Applied Math Seminar

Dr. Ray Treinen, Texas State University

11am-12pm September 27th, 2019

336 Derrick Hall

**Title:** Spectral Methods III

**Abstract:** We will look at Spectral and Pseudospectral Methods for numerically computing solutions of certain problems. The primary problems will be the solution to some differential equations, and in particular partial differential equations. Other problems may be eigenvalue problems, especially as they apply to operator theory. Our primary source material is Trefethen's *Spectral Methods in Matlab*.

We continue this series of lectures with more examples of boundary value problems and their solutions. Particularly we will consider a nonlinear equation, an eigenvalue problem, and we will begin working with spatial dimensions greater than one.

Interested faculty and graduate students are encouraged to attend.