



Differential Equations and Applied Math Seminar

Dr. Ray Treinen, Texas State University

11am-12pm September 13th, 2019

336 Derrick Hall

Title: Spectral Methods II

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 by discussing Chebyshev differentiation matrices. The application of these matrices to boundary value problems for differential equations will also be discussed.

Interested faculty and graduate students are encouraged to attend.