



Differential Equations and Applied Math Seminar

Dr. Ray Treinen, Texas State University

11am-12pm November 22nd, 2019

336 Derrick Hall

Title: Spectral Methods VIII

Abstract: We will look at Spectral and Pseudospectral Methods for numerically computing solutions of certain problems.

We close this series of lectures with a discussion on the stiffness of some systems of ordinary differential equations. The systems we have been considering by using the method of lines for approximating partial differential equations of evolution are often stiff. We will discuss various definitions of this behavior and what sort of methods can be applied to mitigate the computational difficulties found with these systems.

Our primary source material is Trefethen & Embree *Spectra and Pseudospectra*.

Interested faculty and graduate students are encouraged to attend.