Speaker: William Rundell (TAMU)

Title: Inverse Obstacle Problems.

Abstract:

The classical inverse problem for a partial differential equation is to determine an unknown coefficient or boundary condition from additional data measurements. A ubiquitous case is when the coefficient is of the form $\chi(D)$, the characteristic function of some set D (= obstacle).

This is the basis of radar and sonar and nondestructive testing for flaws and inclusions.

This talk will be an introduction to some of the mathematical and computational issues. We will look at only the ``simpler cases'', but as will be quickly apparent, simplicity here, in the usual sense of the word, is merely an illusion.