

Lecturer: Jesus Garcia Falset

Title: Coincidence results and Applications

Abstract:

— From a mathematical point of view, many problems arising from diverse areas of natural science involve the existence of solutions of nonlinear equations with the form

$$t(u) = s(u), \quad u \in M, \quad (1)$$

— where M is a nonempty subset of a Banach space X , and $s, t : M \rightarrow Y$ are nonlinear mappings taking values on another Banach space Y . The problem of finding a solution for Equation (1) is known as a *coincidence problem*.

The purpose of this talk is to study the existence of a coincidence point for two nonlinear mappings using the Leray-Schauder condition.

Later on, we apply these results to obtain the existence of solution to some classes of differential equations.

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