

**Department of Mathematics and Statistics Colloquium**

# **Controllability of Semi-Linear Impulsive Neutral Functional Differential Equations**

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**Abstract:** This talk is based on “Mathematical Control Theory Using Techniques of Functional Analysis and Real Analysis”. Here we examine sufficient condition for controllability of first order Impulsive partial neutral functional differential equations. Here we do not assume that the system generates a compact semi-group, so method is applicable to a wide class of impulsive partial neutral functional differential equations/inclusions in Banach spaces. Also we claim that phase space for infinite delay with impulse, considered by different authors is not correct. In a later part we define a new notion of control called Trajectory-control which is justified by numerical estimations. Examples are provided to illustrate the theory.

**Monday, March 26 at 3:45 in Roop 103**  
**refreshments at 3:30**