DEPARTMENT OF MATHEMATICS

University of Delhi

EXPOSITORY TALK

by

MALAY BANERJEE

Department of Mathematics and Statistics

Indian Institute of Technology, Kanpur

entitled

"STRUCTURAL SENSITIVITY AND GLOBAL BIFURCATIONS ASSOCIATED WITH CHAOTIC DYNAMICS"

Abstract: The routes to chaos and various global bifurcations leading to chaos are two interesting areas of research. Chaotic dynamics are exhibited by a wide range of mathematical models related to various disciplines of science and engineering. Recently, the structural sensitivity of models on the resulting bifurcation structure leading to chaos has received some attention from researchers. The main objective of this talk is to discuss the structural sensitivity of the bifurcation structure associated with the classical Hastings-Powell model and the global bifurcations leading to a chaotic regime in the modified Lorenz system. Systematic bifurcation analysis, including both local and global bifurcations, helps us understand the routes to chaos and provides insight into transients.

FEB 28, 2025 | **11:30 A.M.** | **ROOM LR1**

Tarun Kumar Das

Head, Department of Mathematics