



S N BOSE NATIONAL CENTRE  
FOR BASIC SCIENCES

Block JD, Sector III, Salt Lake, Kolkata 700 106

## DEPARTMENTAL SEMINAR

# Chemical and Biological Sciences

11<sup>th</sup> November, 2022

3.00 PM

ONLINE / FERMION

### SPEAKER



Prof. Malay Banerjee  
Department of Mathematics & Statistics,  
Indian Institute of Technology, Kanpur

### TITLE OF THE TALK

**Systematic local and global bifurcation analysis for ecological models**

### ABSTRACT

Detection of local and global bifurcations in simple nonlinear dynamical systems producing complex bifurcation structures is an active area of research. The non-existence of explicit expression for the equilibrium point poses an additional constraint on bifurcation analysis and finding the bifurcation threshold. The main objective of this talk is to discuss the systematic bifurcation analysis for a nonlinear ordinary differential equation model of population biology, which admits a wide range of local bifurcations of co-dimension one and two along with some global bifurcations.

### HOST FACULTY

**Prof. Gautam Gangopadhyay**  
SENIOR PROFESSOR, CHEMICAL and BIOLOGICAL SCIENCES

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