



**S N BOSE NATIONAL CENTRE  
FOR BASIC SCIENCES**

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

## **DEPARTMENTAL SEMINAR**

# **Physics of Complex Systems**

**26<sup>th</sup> August, 2022**

**4.00 PM**

**ONLINE / FERMION**

### **SPEAKER**

**Dr. Ankur Sensharma,  
Associate Professor of Physics, University of Gour Banga**

### **TITLE OF THE TALK**

## **PERCOLATION IN DISTORTED SQUARE AND SIMPLE CUBIC LATTICES**

### **ABSTRACT**

Percolation is probably the simplest statistical model with rich critical behavior. In this lecture, I will discuss on a simple and realistic model developed by us. This model incorporates the lattice distortions (irregularities) which is inevitably present in almost every natural system. My plan is to illustrate the variation of the site percolation threshold in distorted square and simple cubic lattices, to characterize the critical behavior of the transition, and to indicate their link to some natural phenomena. Comparisons with other well-known percolation models will also be discussed.

### **HOST FACULTY**

**Prof. Subhrangshu Sekhar Manna**  
DEPT. OF PHYSICS OF COMPLEX SYSTEMS

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