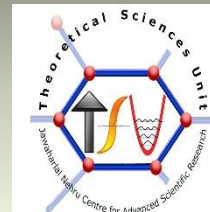




**Jawaharlal Nehru Centre for Advanced Scientific Research**

Jakkur P.O. Bangalore 560 064



## **Theoretical Sciences Unit SEMINAR NOTICE**

### **Title: “Noise in Bacterial Chemotaxis”**

**Abstract:** E. coli cell uses run-tumble motion to search for nutrient or other chemo-attractant in its environment. This phenomenon is known as chemotaxis. We study how the fluctuations present in intracellular signaling network affects different aspect of chemotaxis. We show how this noise can induce a competition between two principal modules of the signaling network, sensing and adaptation, and enhance the chemotactic efficiency. Even for a non-swimming tethered cell, the cell behavior shows interesting dependence on the biochemical noise. We perform exact calculations to study short time extremal response of a tethered cell after application of a stimulus and make experimentally verifiable predictions.

**Speaker: Prof. Sakuntala Chatterjee**

**Affiliation: S.N. Bose National Center for Basic Sciences, Kolkata**

**Date: 18 September 2023 (Monday).**

**Time: 02:30pm (Tea/Coffee at 02:15 pm)**

**Venue: Kanada Auditorium, JNCASR**

**Organizer: Prof. Kavita Jain**

***All are cordially invited***