

## **Seminar**

### **Noise in Bacterial Chemotaxis**

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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 signalling network affects different aspect of chemotaxis. We show how this noise can induce a competition between two principal modules of the signalling network, sensing and adaptation, and enhance the chemotactic efficiency. Even for a non-swimming tethered cell, the cell behaviour 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.

***Monday, Nov 21<sup>st</sup> 2022***

***4:00 PM (Tea/Coffee at 3:45 PM)***

***Auditorium, TIFR-H***