

## **Colloquium**

### **Stochastic resetting: how to avoid wandering off in the wrong direction**

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In this talk I will review the idea of stochastic resetting: by returning some dynamical process to its initial condition one can significantly change the behaviour of the process and indeed improve the typical time to complete some complex tasks. The essence of the idea is that by resetting one cuts off errant trajectories.

The idea has a host of applications in search processes, biochemical reactions, animal foraging, protein-DNA interactions, coagulation-diffusion processes, population dynamics and quantum mechanics.

I will focus on the simple example of a diffusive particle whose position is reset randomly in time with a constant rate  $r$  to some fixed point (e.g., its initial position).

I will discuss recent developments such as the cost of resetting and optimal resetting strategies.

***Tuesday, Nov 28<sup>th</sup> 2023***

***4:00 PM (Tea / Coffee 3.45 PM)***

***Auditorium, TIFR-H***