Seminar

Rudiments of resetting - fundamentals and applications

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Stopping a process in its midst -- only to start it all over again -- may prolong, leave unchanged, or even shorten the time taken for its completion. Among these three possibilities the latter is particularly interesting as it suggests that resetting can be used to expedite the completion of complex processes which otherwise would hinder. I will introduce the problem of resetting using the example of simple diffusion, but will then explain why many unknowns compel us to generalise to arbitrary stochastic processes and resetting mechanisms. I will then demonstrate how the framework developed herein can serve as a universal platform to understand efficiency of biochemical reactions, generic macroscopic & microscopic search processes, and to design performance and optimization in queuing systems.

Tuesday, Dec 6th 2022

4:00 PM (Tea/Coffee At 3:45 PM)

Auditorium, TIFR-H