

Theoriekolloquium

Am **27. April 2023** um **14.15 Uhr** im Raum **W2 1-143** hält

Herr Dr. Satya Majumdar (Paris)

einen Vortrag mit dem Titel

Stochastic Resetting

In this talk, I aim to give a pedagogical overview of the rapidly developing field of “stochastic resetting”, relevant in many fields that typically involve a random search process. Stochastic resetting simply means interrupting the natural dynamics of a system at random times and reset the system back to its initial condition. This resetting move breaks detailed balance and drives the system into a nonequilibrium stationary state. The approach to the stationary state is accompanied by an unusual “dynamical phase transition”.

Moreover, the mean first-passage time to a fixed target becomes a minimum at an optimal value of the resetting rate. This makes the diffusive search process more efficient. Recent experiments in optical traps have verified some of the theoretical predictions, but also have raised new interesting questions. I hope to explain why stochastic resetting has emerged in recent years as an exciting field of research in nonequilibrium statistical physics.

Interessierte sind herzlich eingeladen.

gez. Prof. Dr. Alexander Hartmann