IBPC

Séminaire de Chimie Théorique
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ENS

First-passage times of Markovian and non Markovian random walks

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The first-passage time is a key quantity for evaluating the kinetics of various processes, and in particular chemical reactions involving "small" numbers of particles. A striking example is given by gene transcription, where specific proteins search for target sequences on DNA.

I will present asymptotic results which enable the evaluation of the first-passage time statistics to a target site for a wide range of random processes in confined domains, and show how these results can be extended to non Markovian processes, which are often needed to model transport in complex environments.

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Salle séminaire IBPC (3ème étage)

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