Metastability without time-reversibility

Insuk Seo [1], Claudio Landim[2], Mauro Mariani[3]

[1] UC Berkeley

[2] IMPA

[3] University of Rome, Sapienza

We consider several stochastic processes which exhibit the metastability. The metastability is a phenomenon in which a process starting from one of local minima arrives at the neighborhood of the global minimum after a sufficiently long time scale. The precise asymptotic analysis of this transition time has been known only for the reversible dynamics, based on the potential theory of reversible processes. In this presentation, we introduce our recent rigorous metastability analysis for several non-reversible dynamics based on the general form of potential theory.