Eyring-Kramers formula for nonreversible diffusion processes

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Abstract

The Eyring-Kramers formula gives the expected transition time beteween metastable states for reversible diffusion processes in the small temperature regime. I will present the derivation of this formula to generical nonreversible dynamics, and show that the role of the potential is played by the Freidlin-Wentzell quasipotential. In addition, this formula contains an extra factor that depends on the "non-Gibbsianness" of the system along the most probable escape path from the metastable state.

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