Eyring–Kramers law for Fokker-Planck type differential operators

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In this talk, we consider Fokker-Planck type differential operators associated with general Langevin processes admitting a Gibbs stationary distribution of the form $e^{-fracVh}dx$, where V is the potential energy function and $h > 0$. Under assumptions insuring suitable resolvent estimates, the bottom of the spectrum of these operators satisfies in the low temperature regime $h \to 0$ Eyring-Kramers type formulas. We will focus on these formulas and on the links between the bottom of the spectrum and the long-time behavior of the associated evolution equation. (From a work in collaboration with Jean-François Bony and Laurent Michel)