# The behavior asymptotic variance

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**Résumé**

The asymptotic variance is a natural gauge of the efficiency of the Markov Chain Monte Carlo algorithm. The main objective of this talk is to study the behavior of the asymptotic variance for the antisymmetric perturbations of some reversible diffusion.The analysis is related to the study of antisymmetric perturbations of self-adjoint infinitesimal generators. In this context Hwang C.R. Normand R. and S-J. Wu study the behavior of the asymptotic variance when the amplitude of the drift grows. In this talk we use an H1 approoch due to Bhattacharya, Gupta and Walker in order to obtain a different expression for the limit of the asymptotic variance as the drift grows to infinity.

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