On change point estimation and hypotheses testing for discretely observed diffusion processes

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Abstract

In the first part of the talk we present the problem of change point volatility estimation for discretely observed diffusion processes under several discretization schemes (large sample and high frequency). Consistency and asymptotic distributions are presented.
In the second part of the talk, we present a family of test statistics based on ϕ-divergence measures for ergodic diffusion processes observed at discrete time. Although the tests in this class are asymptotically equivalent, the second order expansion of the test statistics suggest different behavior for the power function of the test in finite samples.