

Brownian motion with drift and regimes

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Abstract

In the time series the study of nonlinear models is increasing and a class of nonlinear models, called threshold models can be found in Tong (1990). Our goal, as in Mota (2008), is to extend the notion of threshold processes to continuous time models and obtain estimation methods for this kind of processes. A diffusion which experiences a regime change upon crossing upper (M) and lower (m) levels will be our generic model for the stochastic process.

Keywords

Regime changes, Consistency.

References

- Mota, P. (2008). *Brownian motion with drift threshold model*. Ph.D Thesis – New University of Lisbon, Portugal.
- Tong, H. (1990). *Non-Linear Time Series: A Dynamical System Approach*. Oxford University Press.