



PROBABILITY SEMINAR

Maximum Likelihood Estimation for Generalized Ornstein-Uhlenbeck Processes

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Abstract. In this seminar, we will discuss the problem of parameter estimation of the Generalized Ornstein-Uhlenbeck processes. Therefore, we will present techniques used by [1] for the estimation of the drift parameter of a Lévy-driving Ornstein-Uhlenbeck process. More precisely, discussed subjects will include Hellinger processes, martingale problems, absolute continuity of a family of parameterized measures, maximum likelihood estimation and asymptotic behavior of estimators.

References

- [1] Hilmar Mai (2012). Drift estimation for jump diffusions: Time-continuous and high-frequency observations. *Ph.D. thesis* Humboldt-Univ. zu Berlin. Available at <http://edoc.hu-berlin.de/docviews/abstract.php?id=39623>.
- [2] Uwe Küchler; Michael Sørensen (1997). Exponential Families of Stochastic Processes. *Springer-Verlag New York*.
- [3] Jean Jacod; Albert N. Shiryaev (1987). Limit Theorems for Stochastic Processes. *Springer Berlin Heidelberg*.