Departamento Académico de Estadística

El Departamento de Estadística del ITAM

anuncia la siguiente sesión de

EL SEMINARIO ALEATORIO

que con el título

DETECTING JUMPS IN HIGH-FREQUENCY FINANCIAL SERIES USING MULTIPOWER VARIATION

Impartirá

CARLA YSUSI M.
BANCO DE MÉXICO

Abstract

When the log-price process incorporates a jump component, realised variance will no longer estimate the integrated variance since its probability limit will be determined by the continuous and jump components. Instead realised bipower variation, tripower variation and quadpower variation are consistent estimators of integrated variance even in the presence of jumps. In this paper we derive the limit distributions of realised tripower and quadpower variation, allowing us to compare these three estimators of integrated variance. Using the limit theories for the differences of the errors, tests for jumps are proposed for each estimator. Using simulated data, the performance of each of these tests is compared. The tests are also applied to empirical data but results need to be taken carefully as market microstructure effects may contaminate real data.

Keywords: Quadratic variation, Multipower variation, Stochastic volatility models, Jump process, Semimartingale, High-frequency data.

Fecha: Viernes 27 de Octubre
Hora: 13:00 hrs.
Salón: B-4

Lista de seminarios próximos. Visite:

http://estadistica.itam.mx/seminarios_prox.html

El Seminario Aleatorio está destinado tanto a profesores como a estudiantes, por lo que el Departamento de Estadística agradece a los profesores que colaboren invitando a sus alumnos a estas sesiones.

María F. Rojano Agraz
ITAM
Depto. Académico de Estadística
Rio Hondo # 1,
Col. Tizapán San Angel
C.P. 01000 México, D. F.
Tel. 5628-4000 ext. 3803
Fax 5628-4086