

DEPARTMENT OF STATISTICS COLLOQUIUM SERIES
Texas A&M University

WILFREDO PALMA

Department of Statistics
Pontificia Universidad Catolica de Chile

**ESTIMATION AND PREDICTION OF LOCALLY STATIONARY
TIME SERIES**

ABSTRACT:

This talk addresses the estimation and forecasting of locally stationary processes. A time-varying parametric formulation of these models is discussed and maximum likelihood techniques are proposed for estimating the parameters involved. Large sample properties of some of these estimates such as consistency, normality and efficiency are established. Furthermore, the finite sample behavior of the estimators is investigated through Monte Carlo experiments. As a result from these simulations, we show that the estimates behave well even for relatively small sample sizes. The problem of calculating linear predictors for this class of models is also discussed. In particular, Kalman filter techniques are discussed to obtain forecasts and prediction bands. Real-life data applications are also presented.

DATE: Thursday, February 23, 2012

TIME: 3: 45 p.m. – 4:45 p.m.

PLACE: Room 113, Blocker