Econ 553b. Econometrics IV: Time Series Econometrics

**Day / time:** Tuesday 3:00-6:00  
**Course Type:** Graduate  
**Course term:** Spring  
**Visiting Instructor(s):** Jia Li  
**Location:** Rm. B8

This is a one semester version of a two-course sequence in time series econometrics. This course provides an introduction to time series methods in econometrics covering aspects of trend behavior, detrending mechanisms and their properties, unit root theory, cointegrated system approaches, realized volatility and quarticity, model selection, Wold and BN decompositions, nonlinear nonstationary models, spatial density asymptotics, and long memory modeling. Both time domain and frequency domain methods are discussed, and Bayesian as well as classical approaches are included. The treatment relies on asymptotic theory for linear processes, martingales and martingale approximations. Theory, computations and some empirical applications are discussed. Most classes are divided into two parts, one dealing with theory and the other with empirics. Credit for the course is obtained from a take home examination, a scientific overview paper, or an empirical paper that may be used for the applied econometrics paper requirement.

**Semester offered:** Spring

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