



The University of Chicago  
Department of Statistics

MASTER'S THESIS PRESENTATION

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**Simultaneous Confidence Bands for Time-varying  
Autoregressive Model**

**THURSDAY, May 10, 2012, at 11:00 AM**  
110 Eckhart Hall, 5734 S. University Avenue

**ABSTRACT**

We use the weighted least square method to estimate the time-dependent parameter function of time-varying  $AR(1)$  model. The asymptotic behavior of the estimator is analysed. We construct simultaneous confidence bands for the parameters on the basis of a strong invariance principle of the stationary process.

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