



THE UNIVERSITY OF  
**CHICAGO**

Department of Statistics

MASTER'S THESIS PRESENTATION

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Time Series Outlier Detection Through Iterative Procedure and  
Gibbs Sampling

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Jones 304, 5747 S. Ellis Avenue

#### ABSTRACT

Outliers and structural changes in time series data can have a significant impact on model selection, parameter estimation, and consequently, on forecasts and other results followed by the analysis. In this paper, we review estimation of the impact of outliers and structural changes and the iterative methods for detecting and handling such disturbances. The Gibbs sampler for the Bayesian analysis of time series can also be used to detect additive outliers in an autoregressive process and such method is also reviewed. The performances of detection methods are discussed through simulation studies.