

**UTSA College of Business**  
**Department of Management Science and Statistics**  
**Research Seminar Series**

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“High Dimensional Econometrics and Identification”

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**Abstract**

This talk is based on Long Liu's new written book “High Dimensional Econometrics and Identification.” The main objective of the book is to provide an up-to-date presentation of the issues of identification and high-dimensional econometrics, as well as insights into the use of these results in empirical studies.

In many applications of econometrics and economics, a large proportion of the questions of interest is identification. It is known that, in many cases, identification could be a problem in the time-series, a cross-sectional or even a panel data with a fixed dimension  $n$  or  $T$ . A researcher may be interested in uncovering the true signal when the data could very noisy such as time-series spurious regression and weak instruments problems, to name a few.

In this talk, we illustrate the true signal and hence identification can be recovered even with noisy data in high-dimensional data, e.g., a panel data with large dimensions  $n$  and  $T$ . We will in particular discuss the following five examples: panel spurious regressions; estimation of autocorrelation parameter in a detrended large panel; the change point estimation and testing in large panels; the weak instrument problem in large panels; the incidental parameters problem in dynamic linear panels.