

# Economics Seminar Series



**Zhaoguo Zhan**

**Coles College of Business  
Kennesaw State University**

## **Double robust continuous updating GMM**

### **Abstract**

We propose the double robust Lagrange multiplier (DRLM) statistic for testing hypotheses specified on the pseudo-true value of the structural parameters in the generalized method of moments (GMM). The pseudo-true value is defined as the minimizer of the population continuous updating objective function of Hansen et al. (1996) and equals the true value of the structural parameter in the absence of misspecification. The (bounding) chi-square limiting distribution of the DRLM test is robust to both misspecification and weak identification of the structural parameters. Weak identification robust tests are size distorted in case of misspecification while misspecification tests are virtually powerless under weak identification so the DRLM test removes an important obstacle for conducting reliable inference in these empirically relevant settings. To emphasize its importance for applied work, we use it to analyze data from Card (1995), Adrian et al. (2014) and He et al. (2017).

**Thursday, November 5 12:30pm - 2:00pm**

**Zoom**

<https://wayne-edu.zoom.us/j/95624290198?pwd=a2s4MVFEeVBzT1hCM3Q0VEVHNkcydz09>



**WAYNE STATE UNIVERSITY**  
**Department of Economics**

Questions? Shooshan Danagoulian [fr4523@wayne.edu](mailto:fr4523@wayne.edu) or Yulya Truskinovsky [yulya.truskinovsky@wayne.edu](mailto:yulya.truskinovsky@wayne.edu)