

XINGTONG ZHANG

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EDUCATION

Ph.D.	Economics, Cornell University, Ithaca, NY	<i>Expected May 2020</i>
M.S.	Applied Economics and Management, Cornell University, Ithaca, NY	<i>May 2014</i>
B.S.	Computer Science, Nankai University, Tianjin, China	<i>June 2012</i>
B.S.	Finance, Nankai University, Tianjin, China	<i>June 2012</i>

FIELD CONCENTRATIONS

- Primary Fields: Theoretical and Applied Econometrics;
- Secondary Fields: Nonlinear Time Series Modeling, Asset Pricing

TEACHING EXPERIENCE

- Econometrics (PhD core), Teaching Assistant to Professor Yongmiao Hong, Fall 2018, Fall 2017
- Econometrics (PhD core), Teaching Assistant to Professor Thomas DiCiccio, Spring 2018
- Applied Econometrics (Undergraduate), Teaching Assistant to Professor Jörg Stoye, Spring 2019
- Applied Econometrics (Undergraduate), Teaching Assistant to Professor Claire Lim, Spring 2016
- Introduction to Probability and Statistics (Undergraduate), Teaching Assistant to Professor Yongmiao Hong, Spring 2015
- Introductory Macroeconomics (Undergraduate), Teaching Assistant to Professor Jennifer Wissink, Fall 2016, Fall 2017
- Introductory Microeconomics (Undergraduate), Teaching Assistant to Professor Richard Burkhauser, Spring 2015

PHD COURSES TAKEN

- Real Analysis, Calculus Based Probability, Stochastic Process, Continuous Time Asset Pricing, Macro Labor, Information, Learning and Expectations in Macro, Tools for Applied Macro

RESEARCH EXPERIENCE

- Research Assistant to Professor Panle Jia Barwick, Cornell University

PRESENTATIONS

- Mathematical Economics and Finance Seminars, Fudan University, Shanghai, China *June 2019*
- The 2nd International Conference on Econometrics and Statistics, Hongkong, China, *June 2018*
- Greater China Area Finance Conference, Xiamen, China *June 2016*

HONORS AND AWARDS

- Cornell Conference Travel Grant *2014, 2015*

Working Papers

- **An Asymptotically Efficient Test for Functional Coefficient Models with Application to Conditional Asset Pricing Models [Job Market Paper]**

We propose a consistent test for model specification in a functional coefficient model that uses the discrete Fourier transform of a consistent nonparametric estimator of the random coefficient. As a generalization of the conditional moment tests by Bierens (1980, 1982), it is applicable in testing part of the coefficient functions, rather than testing for all of them jointly. Although a nonparametric estimation step is included, our method is able to detect local alternatives at a rate of \sqrt{T} , owing to the U-process structure of the test statistics. Monte Carlo studies demonstrate that our method outperforms current nonparametric tests, such as the generalized likelihood ratio test by Fan et al. (2001) and the Wald-typed tests by Li et al. (2002), especially when the sample size decreases and the dimension of the state variables increases. In application, we employ our test to examine the validity of conditional asset pricing models. We demonstrate that the findings in current literature are misleading due to the small sample problem, which is caused by the coarseness of the state variables. We further check the robustness of the results using various combinations of the state variables.

- **Conditional Copula Models with Nonstationary Marginals**

Copula-based models have been successful in modeling multivariate distributions in economics and finance. Based on Sklar's (1959) theorem, the joint distribution can be decomposed as marginal distributions and their dependence structure, the copula. To explain structural changes in economic models, conditional copula has been proposed as in Patton (2006b) and Remillard (2010). While making the dependence parameter to be time-varying, literature pay little attention to the possibility of structural changes in marginal distribution and typically assume it as stationary. In this paper, we try to explore how does nonstationary marginals affect the estimation of conditional time-varying dependence. In application, we compare our results with Patton (2006b) in modeling the asymmetric dependence of foreign exchange rates. The findings can also serve as an empirical evidence of implementing smooth structural changes into test of asymmetric correlations in Hong, Tu and Zhou (2007).

Working in Progress

- **Inference in Functional Coefficient Models**

We propose a consistent test for model specifications in functional coefficient models via discrete Fourier transform (DFT). The DFT of the sample score function can extract the local property of unknown parameters over the state variable. Therefore, our test avoids nonparametric estimation and is asymptotically more efficient than the existing nonparametric tests. It can detect a class of local alternatives at the parametric rate. Furthermore, our test allows the regressors and the state variables to be the same and is also robust to heteroscedasticity and serial correlation. Simulation studies show that the proposed test has reasonable size and excellent power against various misspecifications of coefficient functions.

REFERENCES

Yongmiao Hong (Chair)

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