

# ZHONGHUI ZHANG

February 2020

## PERSONAL PROFILE

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**Citizenship:** People's Republic of China  
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## MAJOR FIELD

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Econometrics, Machine Learning, Financial Economics

## EDUCATION

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**University of Connecticut** June 2020 (anticipated completion)

Ph.D., Economics

Thesis Topic: Three Essays on Econometrics

Committee: Chihwa Kao (chair), Min Seong Kim, Jungbin Hwang

M.S., Master of Science in Quantitative Economics (STEM)

**SUNY at Albany** June 2015

M.A., Mathematics

M.A., Economics

**University of Shanghai for Science and Technology, China** June 2012

B.S., Mathematics

B.A., Finance

## SKILLS

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Language: English (Fluent), Chinese (Native)

Programming: R (primary), Python, Fortran, STATA, Matlab

Other: CFA (level 1), Adobe Premiere

## INTERNSHIP

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### **Luminant Analytics**

*Intern Associate, July - Aug 2019, Hartford, CT*

- Clean and analyze crash data from the Texas Department of Transportation
- Visualize analytic results using Plotly and communicate ideas to the CEO
- Use machine learning methods to train a model for forecasting the future crash
- Work as a mentor of R

### **Industrial and Commercial Bank of China**

*Mortgage Analytics Intern, June - Aug 2012, Yinchuan, China*

- Investigate credit ratings with credit bureaus and reporting agencies
- Submit regular credit and loan consumption reports to management

- Visit borrower's properties and homes for verification and evaluation

## TEACHING EXPERIENCE

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### University of Connecticut

*Principal Instructor*

- Econ 2312: Empirical Methods in Economics II (Fall 2019, Spring 2020)

*Teaching Assistant*

- Econ 6312: Econometrics III (PhD level)(Fall 2018)
- Econ 5315: Financial Econometrics (Master level)(Fall 2017)
- Econ 5202: Macroeconomics (Master level)(Spring 2018)
- Econ 3208: Game Theory (Spring 2017)

## RESEARCH EXPERIENCE

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### University of Connecticut

- Research Assistant for Professor Chihwa Kao, Fall 2018 - Spring 2019
- R handbook for "High Dimensional Econometrics and Identification", Kao, C., and Liu, L. (2019), World Scientific

## JOB MARKET PAPER

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**Kao, C., Kim, M.S. & Zhang, Z. Mahalanobis Metric Based Clustering for Fixed Effects Model. *Sankhya B* (2020). <https://doi.org/10.1007/s13571-019-00211-z>**

Abstract: This paper improves the estimation procedure in the linear panel data model with time-varying group fixed effects in Bonhomme and Manresa (2015). We introduce a Mahalanobis distance-based K-means algorithm (KMM) which takes serial correlation and heteroscedasticity into a count. It will significantly improve the accuracy of estimation in the case of ellipse-shaped data. The Euclidean distance failed in such a situation. Also, we find that the estimator of the common parameter may not converge to the true value during the iteration procedure in Bonhomme and Manresa (2015) since the true value is not the best choice concerning clustering. We compute the infeasible optimal option of beta given the specific structure. Lastly, we provide our empirical method to amplify the group signal and hence improve the estimation of group membership and then the estimator of the common parameter.

## OTHER PAPERS

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**Kao, C. and Zhang, Z. (2019), "Is the recursive preference asset pricing model more flexible? A Monte Carlo Study," *Manuscript*.**

**Zhang, Z. (2019), "Nonlinear models with latent grouping and grouped fixed effects," *Manuscript*.**

## CONFERENCE PRESENTATIONS

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"Is the recursive preference asset pricing model more flexible? Evidence."

- New York Camp Econometrics XIII, April 2018, Bolton Landing, NY.

“Mahalanobis Metric Based Clustering for Fixed Effects Model.”

- New York Camp Econometrics XIV, April 2019, Clayton, NY.
- The 33rd New England Statistics Symposium (NESS), May 2019, Hartford, CT.
- 2019 Asian Meeting of the Econometric Society, June 2019, Xiamen, China.

## AWARDS

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Doctoral Student Travel Fellowship (2020)

Predoctoral Dissertation Fellowship (2019)

Best 3rd Year Paper Award (2018)

Eleanor Bloom Summer Fellowship, University of Connecticut (2017, 2018)

## REFERENCES

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Chihwa Kao (Advisor)  
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University of Connecticut  
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