JASMINE YIKE WANG

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Placement Director: Professor Ufuk Akcigit, uakcigit@uchicago.edu, (773) 702-0433
Graduate Student Coordinator: Robert Herbst, fherbst@uchicago.edu, (773) 834-1972

EDUCATION

The University of Chicago, Chicago, IL, 2011 - present
Ph.D. Candidate in Economics
Job Market Paper: "Panel Data with High-Dimensional Factors: Inference on Treatment Effects with an Application to Sampled Networks"
Expected Completion Date: June 2019

Tilburg University, Netherlands, 2009 - 2010
M.Sc. in Mathematical Economics and Econometrics, *Summa Cum Laude*

Cornell University, Ithaca, NY, fall semester 2008
Visiting student

Tilburg University, Netherlands, 2006 - 2009
B.Sc. in Economics, *Summa Cum Laude*

REFERENCES

Professor Stéphane Bonhomme (Chair)
The University of Chicago
Kenneth C. Griffin Department of Economics
(312) 330-1771
sbonhomme@uchicago.edu

Professor Chris Hansen
The University of Chicago
Booth School of Business
(773) 834-1702
chansen1@chicagobooth.edu

Professor Elena Manresa
New York University
Department of Economics
(510) 417-6467
elena.manresa@nyu.edu

RESEARCH FIELDS

Primary: Theoretical and Applied Econometrics, Applied Microeconomics
Secondary: Digital and Business Economics, Networks, Causal Machine Learning

WORKING PAPERS

"Panel Data with High-Dimensional Factors: Inference on Treatment Effects with an Application to Sampled Networks" (**Job Market Paper**)

Abstract: Factor models are widely used in economics to capture unobserved aggregate shocks and individual reactions to the shocks. While the existing literature focuses on models with a small and fixed number of factors, we develop a new method in this study to allow for a large and growing number of factors under a sparsity assumption on the factor loadings. We call the new approach the *High-Dimensional Interactive Fixed Effects (HD-IFE)* estimator. We provide conditions under which the new estimator is consistent and asymptotically normal. We apply the HD-IFE estimator to the estimation of peer-effects models when the researcher only observes a sample of individuals and the connections among them. In this setting, missing nodes and connections create an endogeneity problem for standard regression analysis, whereas the new estimator provides consistent peer-effects estimates. The sparsity condition of the new estimator assumes that each individual is only affected by a small subset of factors. This is a plausible condition in our empirical application when network connections are sparse, as we observe in a wide range of real-world networks. Monte Carlo simulations demonstrate that when the data generating process contains a large number of factors, the HD-IFE estimator recovers the treatment-effects coefficients and latent factors well, whereas the existing low-dimensional methods in the literature underperform. Empirically, we apply the peer-effects model to examine the existence of tacit collusion on price in the Houston gasoline retail market, for which we obtain different findings by using the new estimator and the low-dimensional ones.

"Consumer Online Search with Partially Revealed Information" (with Chris Gu), Revision Invited by **Management Science**

Abstract: Modern day search platforms, such as Google or Expedia, generally have two layers of information presentation. The outer layer displays the collection of search results with attributes selected by platforms, and consumers click on a product to reveal all its attributes in the inner layer. The amount of information revealed in the outer layer affects the consumer search costs and the probability of finding a match. To address the managerial question of optimal information revelation for the first time, we create an information complexity measure of the outer layer, and study the consumer search process for information at the expense of time and cognitive cost. We leverage a unique and rich panel dataset tracking consumer search behaviors at a large Online Travel Agency (OTA) that allows us to identify the associated cost and the information acquired at each consumer search step. We find that cognitive cost is a major component of search cost, and the share of loading time cost in the overall search costs is much smaller. By varying the information revealed in the outer layer, we find that price revelation shifts consumer search behavior most dramatically compared to the other product attributes. We propose information layouts that Pareto-improve both revenue and consumer welfare for the OTA.

WORK IN PROGRESS

"Numerical Likelihood Estimator for Sequential Search Models" (with Chris Gu)

Abstract: Sequential search model likelihood is a high dimensional object with constraints implied by the observed consumer behavior. Traditional way of computing such likelihood uses simulated method with fixed sampling size. This leads to inaccurate and slow estimator, and limits the complexity of the model class that can be used. Furthermore, as the number of searches grows in a purchase session, the dimension of the probability space grows, and hence the number of simulation has to grow as well, putting more pressure on the simulation based method. We characterize the probability space and develop a numerical estimator that computes the exact likelihood without simulation. As a result, our method resolves the problem of simulation-based method, and saves the computation time by factor of thousands in typical short search panel context, or more when consumers have longer search panel and higher precision requirement for the estimates.

TEACHING EXPERIENCE

Teaching Assistant in the Department of Economics, The University of Chicago:

Ph.D. Courses:
- Social Interactions and Inequality, Professor Steven Durlauf (Spring, 2016)
- Software Engineering for Economists, Professor Philipp Eisenhauer (Spring, 2015)
- Software Engineering Bootcamp, Professor Philipp Eisenhauer (Spring, 2015)
- The Origins and Consequences of Inequality in Capabilities, Professor James Heckman (Winter, 2014)
- Analysis of Microeconomic Data (core course in the Econometrics sequence), Professor Dan Black (Autumn, 2013)

Undergraduate Course:
- Women, Work and Property Rights, Professor Grace Tsiang (Winter, 2015)

AWARDS

2018, Data Award Funding, Department of Economics, The University of Chicago
2013-2016, Social Science Fellowship, The University of Chicago
2012, Munk Prize (for outstanding performance in core Ph.D. courses), Department of Economics, The University of Chicago
2019-2010, HSP Huygens Scholarships
2009, Van Lanschot Scholarship
2008, Dean's List, Cornell University
2007-2009, HSP Huygens Scholarships

PRESENTATIONS

Econometrics Working Group, Department of Economics, The University of Chicago (2016-07-05, 2017-02-28, 2018-05-22, 2018-10-25)

REFEREE

Journal of Political Economy