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Placement Directors: Professor Ufuk Akcigit, uakcigit@uchicago.edu, (773) 702-0433
Professor Manasi Deshpande, mdeshpande@uchicago.edu, (773) 702-8260

Graduate Student Coordinator: Amy Schulz, aschulz@uchicago.edu, (773) 834-1972

Citizenship: New Zealand

Education

University of Chicago, 2016 – Present
Ph.D. Candidate in Economics
Thesis Title: "*Testing for Racial Bias in Police Traffic Searches*"
Expected Completion Date: June 2022

University of Chicago, 2008 – 2012
B.A. Economics

References:

Professor Alexander Torgovitsky (Primary Advisor)
University of Chicago
torgovitsky@uchicago.edu
(773) 702-1569

Professor Stéphane Bonhomme
University of Chicago
stephane@uchicago.edu
(773) 702-8191

Professor Peter Hull
Brown University
peter_hull@brown.edu
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Research Fields:

Primary fields: Applied Econometrics, Econometrics

Secondary fields: Labor Economics

Teaching Experience:

Spring, 2019 — Econometrics (undergraduate), University of Chicago, Lecturer (evaluations; received graduate student teaching award)

Winter, 2019 — Optimization Conscious Econometrics (second year Ph.D. course), University of Chicago, TA for Guillaume A. Pouliot

Fall, 2018	Applied Microeconometrics (second year Ph.D. course), University of Chicago, TA for Alexander Torgovitsky
Spring, 2018	Econometrics III (first year Ph.D. course), University of Chicago, TA for Stéphane Bonhomme

Research Experience and Other Employment:

2017 – Present	University of Chicago, Research Assistant to Alexander Torgovitsky
2017 – 2021	University of Chicago, Research Assistant to Guillaume A. Pouliot
2014 – 2016	Center for the Economics of Human Development, University of Chicago, Research Professional
2012 – 2014	Compass Lexecon (formerly Princeton Economics Group), Research Associate

Honors, Scholarships, and Fellowships:

2016 – Present	Economics Department Ph.D. Fellowship

Computer Languages

R (skilled), Stata (proficient), Python (basic), LaTeX, Git, GIS.

Publications:

"Inference for Support Vector Regression with l1 Regularization" AEA Papers and Proceedings, 2021 (with Yuehao Bai, Hung Ho, Guillaume A. Pouliot)

Abstract: We provide large sample distribution theory for support vector regression (SVR) with l1-norm, along with error bars for the SVR regression coefficients. Although a classical Wald confidence interval obtains from our theory, its implementation inherently depends on the choice of a tuning parameter which scales the variance estimate and thus the width of the error bars. We address this shortcoming by further proposing an alternative large sample inference method based on the inversion of a novel test statistic which displays competitive power properties and does not depend on the choice of a tuning parameter.

Research Papers:

"*Testing for Racial Bias in Police Traffic Searches"* (Job Market Paper)

Abstract: Using a partial identification framework, I construct a flexible test for racial bias in police traffic searches that is valid amid sample selection and statistical discrimination. The test uses instrumental variables that shift the distribution of drivers stopped without shifting the officer's search preference. These instruments enable the test to be performed separately for each officer, thus permitting unrestricted heterogeneity in their preferences and beliefs. By adding randomness to search decisions, I allow the direction and intensity of bias to depend on the officer's beliefs, and I derive sharp bounds on various measures of intensity. I apply the test to 50 officers in the Metropolitan Nashville Police Department and find evidence suggesting 17 officers are biased against minorities and 6 are biased against whites. I also find evidence suggesting the intensity of bias decreases as the risk of the driver carrying contraband grows sufficiently large.

"ivmte: An R Package for Implementing Marginal Treatment Effect Methods" (submitted; with Alexander Torgovitsky)

Abstract: Instrumental variable (IV) strategies are widely used to estimate causal effects in economics, political science, epidemiology, psychology, and other fields. When there is unobserved heterogeneity in causal effects, standard linear IV estimators only represent effects for complier subpopulations (Imbens and Angrist, 1994). Marginal treatment effect (MTE) methods (Heckman and Vytlacil, 1999, 2005) allow researchers to use additional assumptions to extrapolate beyond complier subpopulations. We discuss a flexible framework for MTE methods based on linear regression and the generalized method of moments. We show how to implement the framework using the ivmte package for R.

Works in Progress:

"How Local are Local Average Treatment Effects?" (with Christine Blandhol, John Bonney, Magne Mogstad, Alexander Torgovitsky)