

# Daniel Ober-Reynolds

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## EDUCATION

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- Ph.D. in Economics, University of California – Los Angeles (Expected) June 2024  
Advisor: Andres Santos
- M.A. in Economics, University of California – Los Angeles June 2020
- B.S. *Summa Cum Laude*, Arizona State University May 2016  
Majors: B.S. Economics, B.A. Mathematics, B.A. Philosophy

## RESEARCH

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### WORKING PAPERS

- “Estimating Functionals of the Joint Distribution of Potential Outcomes with Optimal Transport”  
**Abstract:** Many causal parameters depend on a moment of the joint distribution of potential outcomes. Such parameters are especially relevant in policy evaluation settings, where noncompliance is common and accommodated through the binary treatment, binary instrument model of Imbens and Angrist (1994). This paper shows that the sharp identified set of these parameters is an interval with endpoints characterized by the value of optimal transport problems. Sample analogue estimators are proposed based on the dual problem of optimal transport. These estimators are  $\sqrt{n}$ -consistent and converge in distribution under mild assumptions. Inference procedures based on the bootstrap are straightforward and computationally convenient.
- “Robustness to Missing Data: Breakdown Point Analysis”  
**Abstract:** Missing data is pervasive in econometric applications, and rarely is it plausible that the data are missing (completely) at random. This paper proposes a methodology for studying the robustness of results drawn from incomplete datasets. Selection is measured as the squared Hellinger divergence between the distributions of complete and incomplete observations, which has a natural interpretation. The *breakdown point* is defined as the minimal amount of selection needed to overturn a given result. Reporting point estimates and lower confidence intervals of the breakdown point is a simple, concise way to communicate a result’s robustness. An estimator of the breakdown point of results drawn from GMM models is proposed and shown  $\sqrt{n}$ -consistent and asymptotically normal under mild assumptions. Lower confidence intervals of the breakdown point are constructed with a simple bootstrap procedure. The paper concludes with a simulation study illustrating the good finite sample performance of the procedure.

### WORK IN PROGRESS

- “Conditional Mean Inference Under Positivity Constraint”
- “Nonparametric Polychotomous Choice Sample Selection”

## RELEVANT EXPERIENCE

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Amazon, Economist Intern	June 2022 to September 2022 June 2021 to September 2021
UCLA, Research Assistant	May 2019 to March 2020
Federal Reserve Bank of Richmond, Research Associate	June 2016 to August 2018

## TEACHING

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### Teaching Assistant (UCLA)

#### Graduate Courses

Econometrics II (ECON 203B)	Winter 2023
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#### Undergraduate Courses

Introduction to Econometrics (ECON 103)	Fall 2020, Winter 2021, Fall 2022
Probability and Statistics for Economists (ECON 41)	Spring 2021, Spring 2023
Microeconomic Theory (ECON 101)	Spring 2020

## HONORS AND AWARDS

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### UCLA

Dissertation Year Fellowship (DYF)	2023-2024
Graduate Research Mentorship (GRM) Fellowship	2021-2022
NSF GRFP Honorable Mention	2020
University Fellowship	2018-2019

### ASU

CLAS Dean's Medalist (Economics)	Spring 2016
JP Morgan Chase Scholar	2014
Barrett, the Honors College	

## OTHER

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### Seminars and Conferences

Econometric Society North American Summer Meeting (NASM)	2023
UCLA Econometrics Proseminar	2020 to 2023

### Software

Python, MATLAB, R, Stata, L<sup>A</sup>T<sub>E</sub>X

This CV was last updated

30 October, 2023