

ANGELA ZHOU

az434@cornell.edu

EDUCATION

FODSI and Simons Institute, UC Berkeley *2021-2022*
Incoming Assistant Professor, USC Marshall Data Science & Operations *2022-*
Cornell University *September 2016 - May 2021*
Department of Operations Research and Information Engineering.
Undergraduate: Princeton University. Class of 2016, Operations Research and Financial Engineering. Summa cum laude.

RESEARCH INTERESTS

Data-driven decision-making under ambiguity, (robust and trustworthy) statistical machine learning, (robust) causal inference, sensitivity analysis, welfare-centric machine learning, personalization; applications in e-commerce, healthcare, and public policy.

SELECTED PUBLICATIONS

Author order is alphabetical, following Operations Research convention.

Confounding-Robust Policy Evaluation in Infinite-Horizon Reinforcement Learning
Neurips 2020
With N. Kallus

Minimax-Optimal Policy Learning Under Unobserved Confounding *Accepted at Management Science.*
With N. Kallus

Preliminary results appeared in Neurips 2018 under the title “Confounding-Robust Policy Improvement”.

Assessing Algorithmic Fairness with Unobserved Protected Class Using Data Combination *Accepted at Management Science.*
With N. Kallus and X. Mao

REFEREED PUBLICATIONS

The primary publishing venues for machine learning are selective “top-tier” refereed conferences (e.g. Neurips (20.8%, 21.1%, 20.1% acceptance rates), ICML (25.1%), AISTATS (33.2%, 32.4%), FAccT (formerly known as FAT*, 25%)).

Fairness, Welfare, and Equity in Personalized Pricing *Accepted at FAccT 2021.*
Extended version in preparation.
With N. Kallus

Assessing Disparate Impacts of Personalized Interventions: Identifiability and Bounds
Proceedings of Neurips 2019.
With N. Kallus

The Fairness of Risk Scores Beyond Classification: Bipartite Ranking and the α AUC Metric Proceedings of Neurips 2019.

With N. Kallus

Interval Estimation of Individual-Level Causal Effects Proceedings of AISTATS 2019.

With N. Kallus and X. Mao

Residual Unfairness in Fair Machine Learning from Prejudiced Data Proceedings of ICML 2018

With N. Kallus

Policy Evaluation and Optimization with Continuous Treatments Proceedings of AISTATS 2018

With N. Kallus

HONORS/AWARDS

Rising Star in AI for Social Good 2021 (Harvard CRCS)

Rising Star in Data Science 2020 (UChicago CDAC)

Winner, INFORMS 2018 Data Mining Best Paper Award (Confounding-Robust Policy Improvement)

Finalist for Best Paper of INFORMS 2017 Data Mining and Decision Analytics Workshop

National Defense Science and Engineering Graduate Fellowship, awarded 2016

Ahmet S. Cakmak Thesis prize winner for undergraduate thesis, 2016.

PROFESSIONAL EXPERIENCE

Microsoft Research New York City

June 2019 - August 2019

Research Intern; Mentors: Jenn Wortman Vaughan and Miro Dudik

New York

- Researched optimal data collection strategies for improving inequities in machine learning regression model performance across groups.

PlaceIQ

June 2016 - August 2016

Data Science Intern

New York

- Analyzed geospatial basemap data for data analytics company assessing causal effects of online advertising on brick-and-mortar visitation.

AppNexus

June 2015 - August 2015

Optimization Intern

New York

- Developed a A/B testing experiment reporting and analysis tool to analyze revenue lift of production experiments.

INVITED TALKS

Health Data Science Workshop

03/21

Harvard CRCS AI for Social Impact

03/21

Minimax-Optimal Policy Learning under Unobserved Confounding:

Northwestern IEMS	02/21
USC Marshall School of Business, Operations	01/21
UNC Kenan-Flagler School of Business	01/21
Cornell Johnson School of Business	01/21
Stanford Management Science and Engineering	01/21
MIT Sloan/Schwarzman	01/21
UBC Sauder Operations and Logistics	12/20
Berkeley Haas (Operations and IT)	11/20
Columbia IEOR	12/20
University of Minnesota ISYE	12/20
Columbia Biostatistics Causal Inference Learning Group	11/20
Facebook Core Data Science	11/20
Kellogg-Wharton OM Workshop	7/20
Duke Fuqua Workshop on Operations Research and Data Science	12/19
Confounding-Robust Policy Evaluation in Infinite-Horizon Reinforcement Learning:	
INFORMS 2020.	
Assessing Algorithmic Unfairness with Unobserved Protected Class:	
HMI DAIS Seminar at Australian National University	04/21
Experian DataLab Brazil	07/20
CMU Fairness/Ethics/Accountability Reading Group	11/20
Assessing Fairness of Personalized Interventions:	
INFORMS	11/19
Confounding-Robust Policy Improvement:	
INFORMS Conference on Healthcare (7/2019)	
Princeton	04/19
MSR NYC	09/18
INFORMS	11/18
Residual Unfairness:	
Crime Lab New York (UChicago Urban Labs)	07/18
Policy Evaluation and Optimization with Continuous Treatments:	
Spotify	07/17
INFORMS	11/17

SERVICE

Workshop Co-organizing

- “Do the right thing: machine learning and causal inference for improved decision making”
Neurips 2019
- Participatory Approaches to Machine Learning
ICML 2020

- Workshop on Consequential Decision Making in Dynamic Environments Neurips 2020

Journal refereeing: Management Science, Journal of Machine Learning Research, Naval Research Logistics, INFORMS Journal on Computing, Statistics in Medicine, ACM Computing Surveys, Nature Scientific Reports

Conference review: Neurips 2018-2020, ICML 2018-2021, AISTATS 2019, FAT* 2020, AAAI Emerging Track on AI for Social Impact, UAI 2019. Top reviewer designations at Neurips and ICML (top 400, top 5%, top 33%). Expert reviewer ICML 2021.

Program Committee (incl. reviewing): IJCAI Workshop for Social Good 2019, Theoretical Foundations of Machine Learning ICML 2020 workshop, AI in Financial Services Neurips 2020 workshop, MD4SG Conference 2020