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

SELECTED PUBLICATIONS

Author order is alphabetical by default, 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 Management Science, 2021.
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 Management Science, 2021.
With N. Kallus and X. Mao

REFEREED PUBLICATIONS

Fairness, Welfare, and Equity in Personalized Pricing Accepted at FAccT 2021.
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 xAUC 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

OTHER REFEREED PUBLICATIONS

Its COMPASlicated: The Messy Relationship between RAI Datasets and Algorithmic Fairness Benchmarks Neurips 2021 Datasets and Benchmarks Track
M. Bao, A. Zhou, S. Zottola, B. Brubach, S. Desmarais*, A. Horowitz*, K. Lum*, S. Venkatasubramanian**

* alphabetical; otherwise contributional.

WORKING PAPERS

Stateful Offline Contextual Policy Evaluation and Learning Submitted.
With N. Kallus

HONORS/AWARDS

Rising Star in AI (Harvard CRCS)	2021
Rising Star in Data Science (University of Chicago CDAC)	2020
Winner, INFORMS Data Mining Best Paper Award (Confounding-Robust Policy Improvement)	2018
Finalist for Best Paper of INFORMS Data Mining and Decision Analytics Workshop	2017
National Defense Science and Engineering Graduate Fellowship	2016
Ahmet S. Cakmak Thesis prize winner for undergraduate thesis	2016

PROFESSIONAL EXPERIENCE

Microsoft Research New York City	2019
(Hosts: Jenn Wortman Vaughan and Miro Dudk)	
PlaceIQ Data Science	2016
AppNexus Data Science/Optimization	2015

INVITED TALKS

INFORMS Healthcare conference	07/21
Center for Causal Inference Seminar	06/21

ANU HMI Seminar Series 06/21
Health Data Science Workshop 03/21
Harvard CRCS AI for Social Impact 03/21

Minimax-Optimal Policy Learning under Unobserved Confounding:
Northwestern IEMS 2021
USC Marshall School of Business, Operations 2021
UNC Kenan-Flagler School of Business 2021
Cornell Johnson School of Business 2021
Stanford Management Science and Engineering 2021
MIT Sloan/Schwarzman 2021
UBC Sauder Operations and Logistics 2020
Berkeley Haas (Operations and IT) 2020
Columbia IEOR 2020
University of Minnesota ISYE 2020
Columbia Biostatistics Causal Inference Learning Group 2020
Facebook Core Data Science 2020
Kellogg-Wharton OM Workshop 2020
Duke Fuqua Workshop on Operations Research and Data Science 2019

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 2021
Experian DataLab Brazil 2020
CMU Fairness/Ethics/Accountability Reading Group 2020

Assessing Fairness of Personalized Interventions:
INFORMS 2019

Confounding-Robust Policy Improvement:
INFORMS Conference on Healthcare 2019
Princeton 2019
MSR NYC 2018
INFORMS 2018

Residual Unfairness:
Crime Lab New York (UChicago Urban Labs) 2018

Policy Evaluation and Optimization with Continuous Treatments:
Spotify 2017
INFORMS 2017

SERVICE AND REFEREEING

Journal refereeing:

2021: Management Science (MS), Journal of the American Statistical Association (JASA), Biometrika, INFORMS Journal on Computing.

2020: Management Science, Journal of Machine Learning Research (JMLR), Naval Research Logistics, Statistics in Medicine, ACM Computing Surveys, Nature Scientific Reports

Conference review: NeurIPS 2018-2021, 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. NeurIPS 2021 Datasets and Benchmarks Track reviewer.

Senior Program Committee: Theory Area Chair for Equity and Access in Algorithms, Mechanisms, and Optimization (EEAMO) (2021).

Program Committee (incl. reviewing): Theoretical Foundations of Reinforcement Learning ICML workshop, AI in Financial Services NeurIPS 2020 workshop, MD4SG Conference 2020, Workshop on Reinforcement Learning Theory ICML 2021

Other:

2021: Session Organizer, INFORMS Conference on Healthcare. Judge, INFORMS Applied Probability Society Student Paper Competition.

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