ANGELA ZHOU

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EDUCATION

Postdoc at FODSI, UC Berkeley *Fall 2021*
Hosted by Bin Yu; Michael I. Jordan.

Fellow at Simons Institute Program on Causality *Spring 2022*

Incoming Assistant Professor, USC Marshall Data Science & Operations *June 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 uncertainty and 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, Oral
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

JSM	2022
Keynote, CPAIOR masterclass on Machine Learning and Optimization	2022
INFORMS Annual Meeting	2021
Berkeley Causal Inference Research Group	2021
INFORMS Healthcare conference	2021
Center for Causal Inference Seminar	2021
ANU HMI Seminar Series	2021
Health Data Science Workshop	2021
Harvard CRCS AI for Social Impact	2021
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:

Management Science (MS), Manufacturing & Service Operations Management (M&SOM), Journal of Machine Learning Research (JMLR), Journal of the American Statistical Association (JASA), Annals of Statistics (AOS), Biometrika, INFORMS Journal on Computing, Naval Research Logistics, Statistics in Medicine

Conference review:

NeurIPS 2018-2021, ICML 2018-2021, AISTATS 2019/22, FAT* 2020, MD4SG Conference 2020. Top reviewer designations at NeurIPS and ICML (top 400, top 5%, top 33%). Expert reviewer ICML 2021. Neurips 2021 Datasets and Benchmarks. Conference on Causal Learning and Reasoning (CLeaR) 2022.

Program co-chair: ACM Equity and Access in Algorithms, Mechanisms, and Optimization (EEAMO) (2022).

Senior Program Committee: Theory Area Chair for EEAMO 2021.

Grant review: NSF Panelist (2021).

Other: Judge, INFORMS Applied Probability Society Student Paper Competition (2021).

Program Committee (incl. reviewing):

Theoretical Foundations of Reinforcement Learning (ICML 2020), Workshop on Reinforcement Learning Theory (ICML 2021), Causal Inference for Sequential Decision-Making (Neurips 2021), Strategic Machine Learning (Neurips 2021)

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

Machine Learning Meets Econometrics Neurips 2021