

Wenshuo Guo

CONTACT Email: wguo@cs.berkeley.edu
Webpage: <https://people.eecs.berkeley.edu/~wguo/>

EDUCATION **Ph.D. student in Computer Science**
University of California, Berkeley **Fall 2018 - present**

Advisor: [Michael I. Jordan](#)

Area: Machine learning; Artificial Intelligence; Optimization

Affiliations: Berkeley AI Research (BAIR), Berkeley RISE lab

Highlight courses:

Theoretical statistics (I, II); probability theory; convex optimization (II, III); causal inference; robust statistics; machine learning in social dynamics

B.S. in Physics, Computer Science and Mathematics (First class honor)
Hong Kong University of Science and Technology (HKUST)

2014 - 2018

Highlight graduate-level courses:

Computer vision; statistical mechanics; combinatorial optimization; data mining; statistical learning for text data analytics

AWARDS	Google PhD Fellowship	2021–
	Facebook PhD Fellowship (<i>declined</i>)	2021
	Microsoft PhD Fellowship Finalist	2020
	Apple PhD Fellowship Finalist	2020
	UC Berkeley Gilbert Henry Gates Graduate Fellowship	2018-19
	HKUST Undergraduate Research Award Champion	2017
	HKUST Physics Overseas Conference Travel Grant	2017
	Hong Kong Government Scholarship Reaching Out Award	2017
	HKUST Paul and May Chu Physics Research Award Finalist	2016
	HKUST Undergraduate Summer Research Fellowship	2015
	HKUST Physics Department Entry Scholarship	2015
	HKUST University Scholarship	2014-18

TEACHING **Data, Inference, and Decisions**
Jacob Steinhardt, Moritz Hardt, 2020 Spring. (Undergraduate, upper division)

Statistical Learning Theory

Benjamin Recht, Moritz Hardt, 2019 Fall. (Graduate)

INTERNSHIP EXPERIENCE	<p><i>Research intern</i>, Microsoft Research New England lab 2021 Hosted by David Alvarez-Melis</p> <p><i>Undergraduate research intern</i>, HKUST 2015-2018 Hosted by Szeto Kwok Yip, Dit-Yan Yeung, and Mordecai J. Golin</p>
SERVICE	<p>Program committee of International Conference on Algorithmic Learning Theory (ALT) 2022</p> <p>Co-President at UC Berkeley Women in Computer Science and Engineering (WICSE) 2021-22</p> <p>Program chair of WiML workshop at International Conference on Machine Learning (ICML) 2021</p> <p>Social chair at UC Berkeley Women in Computer Science and Engineering (WICSE) 2020-21</p> <p>Reviewer for Conference on Neural Information Processing Systems (NeurIPS) 2020-</p> <p>Reviewer for International Conference on Learning Representations (ICLR) 2020-</p> <p>Reviewer for Conference on Computer Vision and Pattern Recognition (CVPR) 2020-</p> <p>Reviewer for International Conference on Machine Learning (ICML) 2019-</p> <p>Mentor at UC Berkeley CalMentor Program 2020-21</p> <p>Mentor at UC Berkeley AI Research mentor program 2019-</p>
PREPRINTS	<ol style="list-style-type: none"> 1. Learning from an Exploring Demonstrator: Optimal Reward Estimation for Bandits Wenshuo Guo, Kumar Krishna Agrawal, Aditya Grover, Vidya Muthukumar, Ashwin Pananjady <i>Manuscript under review</i>, 2021 2. Robust Learning of Optimal Auctions Wenshuo Guo, Michael I. Jordan, Emmanouil Zampetakis <i>Manuscript under review</i>, 2021 3. Online Learning of Competitive Equilibria in Exchange Economies Wenshuo Guo, Kirthivasan Kandasamy, Joseph E. Gonzalez, Michael Jordan, Ion Stoica <i>Manuscript under review</i>, 2021 4. Multi-Source Causal Inference Using Control Variates Wenshuo Guo*, Serena Wang*, Ding Peng, Yixin Wang, Michael I. Jordan <i>Manuscript under review</i>, 2021 5. Test-time Collective Prediction Celestine Mendler-Dünner, Wenshuo Guo, Stephen Bates, Michael I. Jordan <i>Manuscript under review</i>, 2021 6. Evaluating Recommender Systems under Distribution Shifts and Feedback Loops

Karl Krauth, Sarah Dean*, Alex Zhao*, **Wenshuo Guo***, Mihaela Curmei*, Benjamin Recht, Michael I. Jordan.
Manuscript under review, 2021.

PUBLICATIONS (asterisk indicates joint or alphabetical authorship.)

1. **The Stereotyping problem in Collaboratively Filtered Recommender Systems**
Wenshuo Guo, Karl Krauth, Michael I. Jordan, Nikhil Garg.
Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO), 2021
2. **A Variational Inequality Approach to Bayesian Regression Games**
Wenshuo Guo, Michael I. Jordan, Tianyi Lin.
Proceedings of the 60th IEEE Conference on Decision and Control (CDC), 2021
3. **Robust Optimization for Fairness with Noisy Protected Groups**
Serena Wang*, **Wenshuo Guo***, Harikrishna Narasimhan, Andrew Cotter, Maya Gupta, Michael I. Jordan.
In: *Conference on Neural Information Processing Systems (NeurIPS)*, 2020.
4. **Approximate Heavily-Constrained Learning with Lagrange Multiplier Models**
Harikrishna Narasimhan, Andrew Cotter, Yichao Zhou, **Wenshuo Guo**, Serena Wang. 2020. In: *Conference on Neural Information Processing Systems (NeurIPS)*, 2020.
5. **Finding Equilibrium in Multi-Agent Games with Payoff Uncertainty**
Wenshuo Guo, Mihaela Curmei, Serena Wang.
In: *International Conference on Machine Learning (ICML), Workshop on Theoretical Foundations of Reinforcement Learning*, 2020
6. **Fast Algorithms for Computational Optimal Transport and Wasserstein Barycenter**
Wenshuo Guo, Nhat Ho, Michael I. Jordan.
In: *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2020, pp. 2088–2097.
7. **Neural Kernel Without Tangents**
Vaishaal Shankar, Alex Fang, **Wenshuo Guo**, Sara Fridovich-Keil, Ludwig Schmidt, Jonathan Ragan-Kelly, Benjamin Recht.
In: *International Conference on Machine Learning (ICML)*, 2020.
8. **Spin Model of Two Random Walkers in Complex Networks**
Wenshuo Guo, Juntao Wang, Kwok Yip Szeto.
In: *International Conference on Complex Networks and Their Applications (CNA)*, 2017.
9. **Optimization of Financial Network Stability by Genetic Algorithm**
Juntao Wang, **Wenshuo Guo**, Kwok Yip Szeto.

In: *IEEE/WIC/ACM International Conference on Web Intelligence (ACM-WI)*, 2017.

10. **Minimization of Systemic Risk for Directed Network Using Genetic Algorithm**

Wenshuo Guo, Kwok Yip Szeto.

In: *European Conference on the Applications of Evolutionary Computation (Evo*)*, 2017.

SKILLS

- Programming: Python, C++, SQL, Matlab, Mathematica, experience with TensorFlow, PyTorch, Keras, Git, CSS.
- Language: English, Chinese (native), Cantonese.