

Yuhao Ding

PHD CANDIDATE · INDUSTRIAL ENGINEERING AND OPERATIONS RESEARCH

University of California, Berkeley

+1 5103320516 | [✉ yuhao_ding@berkeley.edu](mailto:yuhao_ding@berkeley.edu) | [🏠 https://yuhaod.github.io/homepage/](https://yuhaod.github.io/homepage/)

Education

University of California, Berkeley

Berkeley, CA

PH.D. STUDENT IN INDUSTRIAL ENGINEERING AND OPERATIONS RESEARCH

August 2018-May 2023

- Advisor: Prof. Javad Lavaei
- GPA: 3.94/4.0

University of Michigan, Ann Arbor

Ann Arbor, MI

MS IN ELECTRICAL AND COMPUTER ENGINEERING

September 2016-April 2018

- Advisor: Prof. Necmiye Ozay
- GPA: 3.94/4.0

Nanjing University of Aeronautics and Astronautics

Nanjing, China

BE IN AEROSPACE ENGINEERING

September 2012-June 2016

- GPA: 93/100
- Honor Graduate

Professional Experience

Microsoft Research

Remote

RESEARCH INTERN

May 2021-August 2021

- Mentor: Dr. Emre Kiciman
- Co-mentors: Dr. Cheng Zhang, Dr. Qie Zhang, Dr. Swati Sharma

University of California, Berkeley

Berkeley, CA

GRADUATE RESEARCH ASSISTANT

August 2018-May 2021

- Advisor: Prof. Javad Lavaei

ford Motor Company

Ann Arbor, MI

RESEARCH INTERN

December 2018-May 2018

- Advisor: Prof. Ilya Kolmanovsky, Dr. Subramanya Nagesh Rao

Publications

JOURNAL

Y. Ding, J. Lavaei, and M. Arcak "Time-variation in Online Nonconvex Optimization Enables Escaping from Spurious Local Minima," conditionally accepted for IEEE Transactions on Automatic Control.

S. Fattahi, C. Jozs, **Y. Ding**, R. Mohammadi, J. Lavaei, S. Sojoudi "Absence of spurious local trajectories in time-varying optimization," conditionally accepted for IEEE Transactions on Automatic Control.

CONFERENCE PROCEEDINGS

Y. Ding, and J. Lavaei. Structured Projection-free Online Convex Optimization with Multi-Point Bandit Feedback. 2021 IEEE conference on Decision and Control (CDC)

Y. Ding, Y. Bi, and J. Lavaei "Analysis of Spurious Local Solutions of Optimal Control Problems: One-Shot Optimization Versus Dynamic Programming." American Control Conference (ACC). IEEE, 2021.

Y. Ding, J. Lavaei, and M. Arcak "Escaping spurious local minimum trajectories in online time-varying nonconvex optimization." 2021 American Control Conference (ACC). IEEE, 2021. **Finalist for Best Student Paper Award.**

Y. Ding, F. Harirchi, S.Z. Yong, E. Jacobsen, N. Ozay. "Optimal Input Design for Affine Model Discrimination with Applications in Intention-Aware Vehicles." 9th ACM/IEEE International Conference on Cyber-Physical Systems (ICCPS), Porto, Portugal, April 2018

K. Singh, **Y. Ding**, N. Ozay, S.Z. Yong. "Input Design for Nonlinear Model Discrimination via Affine Abstraction". Proc. 6th IFAC Conference on Analysis and Design of Hybrid Systems (ADHS), Oxford, UK, July 2018.

IN REVIEW

Y. Ding, J. Zhang, J. Lavaei. "Global Convergence of Stochastic Policy Gradient Methods with Momentum and Entropy", https://lavaei.ieor.berkeley.edu/RL_Ent_2021_1.pdf

Y. Ding, H. Feng, and J. Lavaei. "Aggressive Local Search for Constrained Optimal Control Problems with Many Local Minima." arXiv preprint arXiv:1903.08634.

IN PREPARATION

Y. Ding, E. Kiciman, and C. Zhang, Q. Zhang, S. Sharma "Causal-aware model-based optimization".

Awards, Fellowships, & Grants

2021 **Finalist for Best Student Paper Award**, 2021 American Control Conference (ACC)

2018 **Graduate student Fellowship**, IEOR, UC Berkeley

2016 **China Scholarship Council (CSC) scholarship**,

2015 **The Alan Mulally Leadership Scholarship**, Ford Motor Company
German Academic Exchange Service (DAAD) scholarship,

2014 **Excellent scholarship**, Chinese Aviation Electromechanical System Company

2013 **Chinese Mathematics Competition (Jiangsu province)**, First prize
Chinese National Scholarship,

Teaching Experience

Fall 2019 **IEOR 160: Nonlinear and discrete optimization**, Teaching Assistant

UC Berkeley

Outreach & Professional Development

PEER REVIEW

Systems & Control Letters

Conference on Neural Information Processing Systems

American Control Conference

Conference on Decision and Control

PROFESSIONAL MEMBERSHIPS

IEEE, student member

INFORMS, student member