# Rajiv Sambharya

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## Education

- **Ph.D., Princeton University** 2019-2024
  Operations Research and Financial Engineering
  Thesis: Learning to Accelerate Optimizers
  Supervision: Bartolomeo Stellato
- **M.Sc. University of California - Berkeley** 2017-2018
  Electrical Engineering and Computer Science
  Supervision: Laurent El Ghaoui
- **B.Sc. University of California - Berkeley** 2013-2017
  Electrical Engineering and Computer Science

## Publications

### Conference Proceedings

C1 R. Sambharya, G. Hall, B. Amos, and B. Stellato, "End-to-End Learning to Warm-Start for Real-Time Quadratic Optimization," in *Proceedings of The 5th Annual Learning for Dynamics and Control Conference*, ser. Proceedings of Machine Learning Research, vol. 211, PMLR, 2023, pp. 220–234.

### Preprints

P1 R. Sambharya, G. Hall, B. Amos, and B. Stellato, "Learning to Warm-Start Fixed-Point Optimization Algorithms," *arXiv e-prints: 2309.07835*, 2023, (under review: *Journal of Machine Learning Research*).

P2 A. Askari, G. Negiar, R. Sambharya, and L. E. Ghaoui, "Lifted Neural Networks," *arXiv e-prints: 1805.01532*, 2018.

## Honors and Awards

- **Princeton Excellence in Teaching Award**: Top award winner in engineering 2021 2023
- **Princeton McGraw Teaching Fellow**: Led orientation for new teaching assistants 2022-2023
- **Princeton SEAS Travel Grant Award**: (INFORMS) 2023

## Talks

Learning to Warm-Start Fixed-Point Optimization Algorithms

- INFORMS Phoenix, AZ, October 2023
- MOPTA Lehigh University, August 2023

End-to-End Learning to Warm-Start for Real-Time Quadratic Optimization

- Learning for Dynamics and Control (Poster) University of Pennsylvania, June 2023
- NYC Operations day (Poster) Columbia University, May 2023
- INFORMS Indianapolis, IN, October 2022

Learning 2 Convexify

- ICCOPT Lehigh University, July 2022

Learning for Real-Time Semidefinite Optimization

- INFORMS — Anaheim, CA (hybrid), October 2021

## Teaching

- ORF498: Senior Thesis — Fall 2023
- ORF363: Computing and Optimization for the Physical and Social Sciences — Spring 2023
- ORF387: Networks — Fall 2022
- ORF522: Linear and Nonlinear Optimization (Graduate-level) — Fall 2021
- ORF307: Optimization — Spring 2021 (Head TA), 2022
- ORF455: Energy and Commodities Markets — Fall 2020

## Industry Experience

- Machine Learning Engineer at Linc Global — Sunnyvale, CA, July 2018 - July 2019
- Software Engineering Intern at Amazon — Seattle, WA, June 2016 - August 2016

## Peer Review

- Learning for Dynamics and Control

## Technical Skills

- **Programming languages**: Python, Matlab, Julia, R, C, Java, SQL, HTML
- **Tools**: Git, LaTeX, Slurm, GPU, JAX, PyTorch, Tensorflow