Rajiv Sambharya

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Education

2019 – 2024 **Ph.D., Princeton University**
Operations Research and Financial Engineering
Thesis: Learning to Accelerate Optimizers
Supervision: Bartolomeo Stellato

2017 – 2018 **M.Sc. University of California - Berkeley**
Electrical Engineering and Computer Science
Supervision: Laurent El Ghaoui

2013 – 2017 **B.Sc. University of California - Berkeley**
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*, 2023, (submitted).

P2 A. Askari, G. Negiar, R. Sambharya, and L. E. Ghaoui, "Lifted neural networks," *arXiv e-prints*, 2018.

Honors and Awards

Princeton Teaching Award — Top award winner within engineering departments — 2021
Princeton McGraw Teaching Fellow — Led orientation for new teaching assistants — 2022-2023
Princeton SEAS Travel Grant Award — For attending 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

ORF522	Linear and Nonlinear Optimization (Graduate-level)	Fall 2021
ORF307	Optimization	Spring 2021 (Head TA), 2022
ORF363	Computing and Optimization for the Physical and Social Sciences	Spring 2023
ORF387	Networks	Fall 2022
ORF455	Energy and Commodities Markets	Fall 2020
ORF478	Senior Thesis	Fall 2023

Industry Experience

- Linc Global — **Machine Learning Engineer** — Sunnyvale, CA, July 2018 - July 2019
- Amazon — **Software Engineering Intern** — 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