

# HARIPRIYA PULYASSARY

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## EDUCATION

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- AUG 2027 **PhD Student – Operations Research**  
(Expected) **(Cornell University)**  
Advisors: Prof. David Shmoys & Prof. Manxi Wu  
Research focus: Design of optimization methods to improve the sustainability of transportation and logistics networks, particularly in the context of electric vehicles  
Coursework: Mathematical Programming I, Applied Stochastic Processes, Computational Methods in OR, Analysis of Algorithms, Statistical Principles, Foundations of Reinforcement Learning.
- AUG 2022 **Masters of Mathematics in Combinatorics & Optimization**  
**(University of Waterloo)**  
Advisor: Prof. Chaitanya Swamy  
Research focus: Algorithm design for facility location and clustering problems in ordinal settings (i.e. limited information regarding the underlying distances is known).  
Coursework: Combinatorial Optimization, Semidefinite Programming
- APR 2021 **Bachelors in Computer Science, Co-op**  
**(University of Waterloo)**  
Joint Honours in Combinatorics & Optimization,  
Minor in Statistics

## PUBLISHED ARTICLES

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- 2025 Constant-factor distortion mechanisms for  $k$ -committee elections  
H. Pulyassary and C. Swamy, *AAAI 2025* (Oral paper)
- 2024 Market Design for Capacity Sharing in Networks  
S. Amin, P. Jalliet, H. Pulyassary, M. Wu, *WINE 2024*
- 2024 Digital Transformation in Transportation Systems: Navigating User Behavior and System Efficiency  
H. Pulyassary and M. Wu, *INFORMS 2024 tutORial*
- 2024 Network Flow Problems with Electric Vehicles  
H. Pulyassary, K. Kollias, A. Schilds, D. Shmoys, M. Wu, *IPCO 2024*  
(Major revisions in *Mathematical Programming B*)
- 2023 Capacity Allocation and Pricing of High Occupancy Toll Lane Systems with Heterogeneous Travelers  
H. Pulyassary, R. Yang, Z. Zhang, M. Wu, *CDC 2023*
- 2021 The aggregation closure is polyhedral for packing and covering integer programs.  
K. Pashkovich, L. Poirrier, and H. Pulyassary, *Mathematical Programming*

## OTHER ARTICLES

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- 2025 Adaptive sampling algorithms for minimum-norm  $k$ -clustering  
H. Pulyassary and C. Swamy, working paper.
- 2021 On the Randomized Metric Distortion Conjecture  
H. Pulyassary and C. Swamy, unpublished manuscript on the ArXiv.

## INDUSTRY EXPERIENCE

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JAN 2020 APR 2020	<b>Software and Data Engineering Intern</b> NATIONAL BANK OF CANADA Implemented tools and pipelines for internal use (by NBC's data science team).
MAY 2018 AUG 2018	<b>Data Science and Solutions Intern</b> ZIGHRA Independently developed a new version of an anomaly detection model with performance significantly surpassing that of the original model. Also implemented the code needed for engine integration.
MAY 2017 AUG 2017	<b>Data Science Intern</b> ZIGHRA

## TEACHING EXPERIENCE

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### Teaching Assistant

SPRING 2025	<i>ORIE 3310 Optimization II</i>	Cornell University
SPRING 2024	<i>ORIE 4742 Info Theory, Probabilistic Modeling, and Deep Learning</i>	Cornell University
FALL 2022	<i>ORIE 4350 Introduction to Game Theory</i>	Cornell University
SUMMER 2022	<i>CO 250 Introduction to Optimization</i> – Head TA • Received the Outstanding TA award	University of Waterloo
WINTER 2022	<i>CO 353 Computational Discrete Optimization</i> • Nominated for the Outstanding TA award	University of Waterloo
FALL 2021	<i>CO 255 Introduction to Optimization (Advanced)</i>	University of Waterloo
SUMMER 2021	<i>CO 250 Introduction to Optimization</i>	University of Waterloo

## CONFERENCE & SEMINAR PRESENTATIONS

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### Constant-factor distortion mechanisms for $k$ -committee elections

*39th AAAI Conference on Artificial Intelligence (Feb 2025)*

### Network Flow Problems with Electric Vehicles

*INFORMS 2024 Annual Meeting (Oct 2024)*

*25th International Symposium on Mathematical Programming (July 2024)*

*25th Conference on Integer Programming and Combinatorial Optimization (July 2024)*

*ORIE Advisory Council meeting (May 2024)*

### Market Design for Capacity Sharing

*WINE 2024 (Dec 2024)*

*INFORMS 2023 Annual Meeting (Oct 2023)*

## OTHER ACTIVITIES

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2023-2025	PhD colloquium & Discrete Optimization Reading Group co-organizer (Cornell ORIE)
2024 & 2025	Co-organizer of Cornell-Columbia-NYU joint student colloquium
2023-2025	Cornell INFORMS student chapter: Secretary
2022-2023	First-year Colloquium co-organizer (Cornell ORIE)