

Alexandria Schmid

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Pronouns: she/her

EDUCATION

Massachusetts Institute of Technology Cambridge, MA
PhD in Operations Research Aug. 2020 – May 2025
Advisor: Alexandre Jacquillat

Georgia Institute of Technology Atlanta, GA
B.S. Industrial & Systems Engineering Aug. 2012 – May 2016

RESEARCH AND INDUSTRY EXPERIENCE

- **Massachusetts Institute of Technology** Cambridge, MA
Graduate Research Assistant Sept. 2020 - Present
 - Conducting research in large-scale optimization, with a focus in transportation and routing
- **Amazon Robotics** North Reading, MA
Research Science Intern May 2023 - Aug. 2023
 - Developed a robust optimization model to schedule robots to deliver work to stations, with dependence between tasks and highly variable robot travel times
 - Solved the model via an adversarial scenario generation algorithm, providing efficiency benefits of 10-20% over baseline heuristics
 - Implemented the model and algorithm in a high-fidelity Java simulation for further study
- **The Home Depot** Atlanta, GA
Senior Analyst - Supply Chain Analytics May 2016 - Aug. 2020
 - Built logic and strategy for a new in-house replenishment system to unify and replace existing supply chain management systems
 - Designed new order aggregation logic to reduce inventory by \$70 million, primarily targeting slow-moving inventory
 - Completed a comprehensive analysis of replenishment system usage and identified multiple company-wide inventory process issues that have since been addressed
- **Georgia Institute of Technology** Atlanta, GA
Undergraduate Research Assistant Aug. 2015 - May 2016
 - Created an integer optimization model to automate class scheduling and instructor assignment for the School of Industrial and Systems Engineering

PUBLICATIONS

- A. Jacquillat, A. Schmid and K. Wang, “Optimizing relay operations toward sustainable logistics”. Submitted.
- C. Barnhart, A. Jacquillat, and A. Schmid, “Task design and assignment in robotic warehousing”. Submitted.

PRESENTATIONS

- Relay logistics: a multi-variable generation approach
 - 2021 INFORMS Annual Meeting
 - 2021 INFORMS Transportation and Logistics Workshop
 - 2022 Triennial Symposium on Transportation Analysis XI
- Task assignment and route planning in robotic warehousing
 - 2022 INFORMS Annual Meeting
 - 2023 Manufacturing and Service Operations Management Conference
 - 2023 INFORMS Annual Meeting

TEACHING EXPERIENCE

- **Optimization Methods (15.093)** Sept. 2023 - Dec. 2023
Teaching Assistant
 - Prepared and taught recitation sessions, held office hours, and supervised final projects
 - Introduced poll questions to make interactive teaching possible for 120-person recitation sessions
- **Computing for Optimization and Statistics (15.S60)** Jan. 2023
Instructor of Record
 - Coordinated an eight session course on computational research pipeline design: data and visualization in R, machine learning in Python, optimization in Julia, high-performance computing, and version control
 - Designed and taught sessions on Git and high-performance computing
Session Instructor Jan. 2022
 - Designed and taught a workshop on Git, Github, distributing computing, and LaTeX
- **Integer Programming and Combinatorial Optimization (15.083)** Jan. 2022 - May 2022
Teaching Assistant
 - Prepared and taught weekly recitation sessions, held office hours, and supervised final projects
 - Integrated active learning activities into the existing recitation materials
- **Georgia Tech Center for Academic Success** Aug. 2015 - May 2016
1-on-1 tutor

AWARDS AND FELLOWSHIPS

- **MIT Teaching Development Fellow** 2022 - 2023
- **MIT Social and Ethical Responsibilities of Computing Scholar** 2022
- **First Place in Georgia Tech Industrial Engineering Senior Design Competition** 2016
- **President's Undergraduate Research Award** 2015
- **Stamps President's Scholarship** 2012

PROGRAMMING SKILLS

Languages: Julia, Java, Python, SQL, R