# Ritesh Ojha

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I am a **third-year Ph.D. student** in the Department of Industrial and Systems Engineering at **Georgia Tech**. My research thesis with **Dr.Alan Erera** focuses on integrating planning decisions with operations scheduling in service networks. We develop scalable algorithms that leverage the power of mixed-integer programming and machine learning-based methodologies to provide implementable solutions.

***Research Interests***: Network Design and Scheduling, Mixed-Integer Programming, Data-driven Heuristics, Learning-based Decomposition Techniques for Large Scale Service Networks

## Education

**Georgia Institute of Technology** — **Atlanta, USA**
*PhD in Operations Research, Industrial and Systems Engineering* — *Aug. 2019 – Expected Dec 2023*

**Georgia Institute of Technology** — **Atlanta, USA**
*MS in Operations Research, Industrial and Systems Engineering* — *Aug. 2018 – Present*

**Indian Institute of Technology** — **Kharagpur, India**
*Bachelor of Technology, Industrial and Systems Engineering* — *Aug. 2013 – July. 2017*

## SKILLS

- **Tech to Teaching**: Completed Associate Level CIRTL/ Tech to Teaching Certification Program
- **Coursework**: Linear and Discrete Optimization, Probabilistic Modeling, Regression and Time Series Modeling, Logistics and Supply Chain Optimization, Forecasting, Risk Management
- **Computer Programming Languages**: C++, Python

## Publications

- **Ojha, R.**,Erera, A.,Boland, N.& Savelsbergh, M. (2021) Inventory-aware Long-term Equipment Planning for Service Networks. **IISE Annual Conference and Expo 2021**.
  - **Best Student Paper** in the 2021 IISE Logistics & Supply Chain (LSC) Division
- **Ojha, R.**,Tiwari, M.K.,Ghadge, A.& Bittici, U. (2018) Bayesian Network Modelling for Supply Chain Risk Propagation. **International Journal of Production Research**.
- Ghadge, A., Dani, S., **Ojha, R.**, & Caldwell, N. (2017). Using risk sharing contracts for Supply Chain Risk Mitigation: A buyer-supplier power and dependence perspective. **Computers & Industrial Engineering**, 103, 262-270.

## Industry Experience

**UPS: Graduate Research Assistant, Georgia Tech, Atlanta, USA** *Fall 2019 - present*

- Mixed integer-programming based **local search** technology for large-scale **load planning** problems
- **Decomposition** algorithms for **scheduling trucks** at cross-docks with **resource constraints**
- Implementable solutions for inventory-aware **equipment leasing** and balancing for **peak demand**

**The Home Depot: Data Scientist, Atlanta, USA** *Summer 2019*

- Impact of **space allocation** optimization on **product inventory**

**TCG Digital: Operations Research Consultant, Kolkata, India** *July 2017-July 2018*

- Demand **forecasting** for a retail chain and a low-cost airline
- Large-scale optimization in petrochemical vertical

## Drafts in Progress

- **Ojha, R.**, Marshall, L. & Boland, N.(2021) Iterative Time Dilation Algorithms to solve **Airline Schedule Design Problem**
- **Ojha, R.** & Erera, A.(2021) **Cross-Dock Truck Scheduling Problem** with Workforce Constraint
- Chu, A., **Ojha, R.** & Keskinocak, P.(2021) Optimizing **Shift Schedules And Dispatch Of Safety Patrol Officers** For Denver Public Schools

## Presentations

- An Exact Algorithm to solve Cross-Dock Truck Scheduling Problem with Workforce Constraint
  - To be presented at **Informs Computing Society Conference 2022**, Tampa, USA
- Cross-Dock Truck Scheduling with Workforce Constraint
  - To be presented at **Transportation Science and Logistics Workshop 2021** , Ahmedabad, India
- Cross-Dock Truck Scheduling with Workforce Constraint
  - To be presented at **INFORMS Annual Meeting 2021**, Anaheim, USA
  - *Session*: Integer Programming and Combinatorial Optimization
- Iterative Time Dilation Algorithms to solve Airline Schedule Design Problem
  - **European Conference on Operational Research (EURO) 2021**, Athens, Greece (virtual)
  - *Session*: Combinatorial Optimization for Distribution and Logistics
- Inventory-aware Long-term Equipment Planning for Service Networks
  - **IISE Annual Conference and Expo 2021** (virtual)
  - *Session*: Logistics and Supply Chain

## Honors and Awards

- **1st Place** in IISE Logistics and Supply Chain Division **Best Student Paper** Competition (2021)
- Phillip J. and Delores A. Scott Graduate Student **Health and Wellness Award** (2021)
- Stewart M. Fellowship, ISyE, Georgia Institute of Technology (2019,2020)
- Day Fellowship, ISyE, Georgia Institute of Technology (2019,2020)

## Current Professional Affiliations

- Institute for Operations Research and the Management Sciences (INFORMS)
- Institute of Industrial and Systems Engineers (IISE)

## Extracurricular Acitivities

- **Running**: Completed Half-marathon in 1:57:56; Training for Publix Marathon *Apr 2021-Present*
- **Biking**: Completed 185 miles in Biketober Challenge in Atlanta; Training for 100k *Sep 2021-Present*