Sahrish Jaleel Shaikh

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Objective

Graduate research assistant primarily interested in the research at the intersection of the Physical Internet, Supply Chain Engineering and Logistics. Seeking to leverage acquired academic knowledge and work experience in developing strategies to improve complex supply chain systems.

Education

Dec 2025 (*Expected*) **Ph.D. Industrial Engineering** - Georgia Institute of Technology, Atlanta, GA
Advisor: Dr. Benoit Montreuil

May 2021 **M.Sc. Industrial Engineering** - Georgia Institute of Technology, Atlanta, GA
CGPA: 3.7/4.00

May 2019 **M.Sc. Supply Chain Engineering** - Georgia Institute of Technology, Atlanta, GA
CGPA: 3.78/4.00

Aug 2016 **B.Sc Hons Management Science** - Lahore University of Management Sciences(LUMS), Pakistan
CGPA: 3.71/4.00 | Graduation with distinction

Work Experience

Aug 2019 present **Graduate Research Assistant** - Georgia Institute of Technology, Atlanta GA
Working towards developing robust protocols, agent-based simulation models and designing tools for Physical Internet models that reflect cooperation within multi-echelon supply chains. [1], [2], [4]

- **Net Zero Freight Systems** (2022 - Present): *Sustainable Practices and Energy Efficiency*
  - Working on design and implementation of strategies for achieving net-zero emissions in freight transportation, including the use of alternative fuels, vehicle electrification, and route optimization. [3]
  - Collaborating with industry partners and stakeholders to discuss innovative freight solutions that align with global sustainability goals.
- **Steelcase Inc.** (2022 - 2024): *Regional Distribution Center (RDC) Load Leveling Optimization*
  - Utilizing advanced optimization models (leveraging Gurobi optimizer) to strategically level logistics workload, considering parameters such as handling units, truck capacities, and loading date delays, directly impacting operational costs and efficiency.
  - Developing a Linux-based execution guide for deploying and managing Python scripts, ensuring secure and efficient operations on enterprise-level servers
- **PPE Supply and Distribution** (2020 - 2022): *Critical Consumables for Pandemic Response*
  - Collaborated with a team of researchers to develop and lead the implementation of a highly effective, quasi-autonomous distribution system for personal protection equipment (PPE) during the COVID-19 pandemic at Georgia Tech, achieving zero stockouts and minimal urgent user requests throughout the pandemic.
  - Conducted comprehensive system performance evaluations, leveraging advanced control tower analytics to monitor real-time inventory and ensure seamless supply chain continuity.
  - Explored the scalability of autonomous supply systems, proposing strategic enhancements including the use of smart dispensers, autonomous vehicles, and modular containers, setting a precedent for future technological integration in critical supply logistics. [6] [7]
- **SF-Express** (2019 - 2020): *Network Redesign for Multinational Logistics*
  - Worked with SF-Express to redesign their network using modular containers, open flow consolidation, and on-demand resource sharing.
  - Developed and implemented inter-hub shuttling protocols based on the Physical Internet principles, enhancing operational efficiency through dynamic, flexible routing systems. [10]
- **United Postal Service (UPS)** (2019 - 2020): *Multimodal Transportation Network Optimization*
  - Evaluated containerization, pre-consolidation, and hyperconnected delivery of parcels in a mesh-like multimodal transportation network in the United States and Canada. [8] [5]
  - Developed the HyPTLI model, utilizing innovative multi-tier mesh networks to facilitate more efficient and resilient package routing and delivery mechanisms across urban and regional scales.[9]
  - Advocated for the implementation of open protocols and digital platforms, ensuring seamless integration and real-time management of logistics operations across diverse stakeholders.

July 2016 – Aug 2017 **Associate Manager - Supply Network Operations** - Procter & Gamble Pakistan Pvt Ltd.

Worked in the Physical Distribution team and spearheaded operations as well as strategic imports and warehousing projects

- Analysed E2E supply chain to find new opportunities and potential savings
- Evaluated Direct Port Shipments (DPS) of import commodities from Port Qasim to all the cities in the national network of P&G Pakistan. The project was able to deliver annual savings of $2M.
- Handled the physical distribution of goods from Port/Warehouse to distributor.
- Developed skills to deal with external stakeholders including the Pakistan Customs Authority

June 2015 – June 2016 **Research Associate** - LUMS Centre for Islamic Finance (CIF)

Developed an interactive financial database for the State Bank of Pakistan

- Presented recommendations in the Islamic Finance, Banking & Business Ethics Global Conference 2016

June 2015 – Aug 2015 **Intern, Supply Chain Department** - Engro Polymer & Chemicals Ltd,Pakistan

Investigated reasons of increasing procurement cost of the company and advised solutions

- Performed a spend analysis on the data provided by the company to identify the opportunities of strategic sourcing to the company
- Proposed recommendations to the company that led to $400K savings over the fiscal year

Aug 2014 – June 2016 **Teaching Assistant** - Lahore University of Management Sciences,Pakistan

Conducted lectures, graded assessment instruments and reported to the instructor weekly.

- Courses: Operations Research, Business Ethics, Management Science
- Developed problem solving and interpersonal skills by giving lectures and engaging with students.

Teaching Experience

Casework Planning — Benoit Montreuil, **Sahrish Jaleel Shaikh**, Onkar Kulkarni, "Hyperconnected Automotive Deployment", ISyE 6339 - Supply Chain Information Systems, Georgia Institute of Technology, Spring 2022

Casework Planning — Benoit Montreuil, **Sahrish Jaleel Shaikh**, Onkar Kulkarni, "Hyperconnected Automotive Delivery", ISyE 6339 - Supply Chain Information Systems, Georgia Institute of Technology, Spring 2022

Guest Lecture — **Sahrish Jaleel Shaikh** and Onkar Kulkarni, "Hyperconnected Logistics Networks:Resilient Hub Network Design and Inter-Hub Transportation Protocols", ISyE 6339 - Supply Chain Information Systems, Georgia Institute of Technology, Spring 2022

Workshops and Invited Talks

May 2024 "Revolutionizing Regional Freight: PI-Enabled Transformations in the Southeast US Intermodal Systems" presented at Thematic Plenary Session at International Physical Internet Conference 2024

May 2023 "Impact of Modular Containerization on Parcel Logistics Network" presented at IISE Annual Conference and Expo 2023 in New Orleans

May 2023 "Beyond Borders:the Global Semiconductor Supply Chain" poster presented at Georgia Tech Chips Day

May 2022 "Physical Internet based Critical Supply System-Living Lab Initiative for PPE supply and distribution during COVID-19 Pandemic" presented at IISE Annual Conference and Expo 2022 in Seattle

May 2021 "Protocols for Hub-Based Modular Container Set Consolidation and Inter-Hub Transportation Service Requesting" presented remotely at IISE Annual Conference and Expo 2021

May 2021 "GT PPE Supply and Distribution Initiative" presented remotely at the May 2021 ITAC Meeting organized by Information Technology Advisory Community (ITAC) at Georgia Institute of Technology

Technical Experience

- **Operations Research**: Linear/Mixed Integer Programming, Stochastic Programming, Dynamic Programming
- **Software**: Gurobi, Tableau, Power BI, QGIS, AnyLogic, SPSS, MATLAB
- **Programming**: R, Python, SQL, LaTeX

Awards and Certificates

May 2025	2nd Best Student Paper Award at IISE Annual Conference and Expo 2025, Atlanta, USA [2]
June 2023	Physical Internet Generation Award at the International Physical Internet Conference (IPIC 2023), Greece
July 2018	Physical Internet Student Award at the International Physical Internet Conference (IPIC 2018), Netherlands
Apr 2018	Completed Global Logistics Scholars Program sponsored by Georgia Tech Supply Chain Logistics Institute (GT-SCL)
Aug 2017	Recipient of the US Fulbright Scholarship for Masters program at Georgia Institute of Technology
May 2017	P&G Power of You (POY) awards in two consecutive quarters under P&G's employee recognition program
May 2016	Dean's Honor List Award at 28th Convocation of Lahore University of Management Sciences, Pakistan

Selected Publications

[1] P. M. **S. J. Shaikh** and B. Montreuil, "Dynamic freight routing and dispatch protocols for the physical internet," in *Proceedings of IPIC 2025 International Physical Internet Conference)*, 2025.

[2] Y. L. **S. J. Shaikh** Praveen Muthukrishnan and B. Montreuil, "Dynamic directional routing of freight in the physical internet," in *IISE Annual Conference. Proceedings*, Institute of Industrial and Systems Engineers (IISE), 2025.

[3] J. Li, **S. J. Shaikh**, and B. Montreuil, "Hyperconnected transportation planning: Advancing a multimodal relay ecosystem," in *Proceedings of IPIC 2024 International Physical Internet Conference)*, 2024.

[4] **S. J. Shaikh** and B. Montreuil, "Dynamic directional routing for the physical internet: A sector-based approach with dynamic adjustment," in *Proceedings of IPIC 2024 International Physical Internet Conference)*, 2024.

[5] N. Grover, **S. J. Shaikh**, L. Faugère, and B. Montreuil, "Surfing the physical internet with hyperconnected logistics networks," in *Proceedings of IPIC 2023 International Physical Internet Conference)*, 2023, pp. 338–347.

[6] **S. J. Shaikh**, A. S. Pothen, and B. Montreuil, "Hyperconnected and autonomous distribution system for societally critical products," in *Proceedings of IPIC 2023 International Physical Internet Conference)*, 2023, pp. 315–325.

[7] **S. J. Shaikh**, A. S. Pothen, and B. Montreuil, "Hyperconnected critical-product supply and distribution system: Towards autonomous operations," in *Proceedings of IFAC World Congress 2023)*, 2023, pp. 8194–8199.

[8] **S. J. Shaikh**, N. K. M. Rababah, B. Montreuil, and J. S. Smith, "Modular containerization of parcel logistics networks: Simulation-based impact assessment," in *Proceedings of IPIC 2023 International Physical Internet Conference)*, 2023, pp. 230–240.

[9] **S. J. Shaikh**, N. Kim, B. Montreuil, and P. Vilumaa, "Conceptual framework for hyperconnected package transport logistics infrastructure," in *Proceedings of IPIC 2021 International Physical Internet Conference)*, 2021, pp. 268–280.

[10] **S. J. Shaikh**, B. Montreuil, M. Hodjat-Shamami, and A. Gupta, "Introducing services and protocols for inter-hub transportation in the physical internet," in *Proceedings of IPIC 2021 International Physical Internet Conference)*, 2021, pp. 54–65.

Book Chapters

2022 Li J., **Shaikh S.**, B. Montreuil, "Physical Internet Operations: Hyperconnected Logistics Realization of Sustainability (Mandarin & English versions)," in *Physical Internet: The Revolution We are Encountering – Hundreds of Schools of Thought Argue About the Physical Internet*, Ed. by Tian Min & Ma Hong, China, pp. 285-303, ISBN 978-7-5496-3853-6.