Lauren N. Steimle

Harold R. and Mary Anne Nash Early Career Professor and Assistant Professor

H. Milton Stewart School of Industrial and Systems Engineering
College of Engineering
Georgia Institute of Technology
Atlanta, GA 30332-0760, USA

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Harold R. and Mary Anne Nash Early Career Professor and Assistant Professor
H. Milton Stewart School of Industrial and Systems Engineering
`http://pwp.gatech.edu/steimle/`
steimle@gatech.edu
September 8, 2025

Earned Degrees

Ph.D.	University of Michigan, *Industrial & Operations Engineering*	05/2019
M.S.E.	University of Michigan, *Industrial & Operations Engineering*	04/2016
B.S.	Washington University in St. Louis, *Systems Science & Engineering* Minor: Operations & Supply Chain Management Graduated *summa cum laude*	05/2014

Employment History

Georgia Institute of Technology
H. Milton Stewart School of Industrial & Systems Engineering

Harold R. and Mary Anne Nash Early Career Professor	*08/2023–present*
Assistant Professor	*01/2020–present*

University of Michigan
Department of Industrial & Operations Engineering

Research Fellow	*05/2019–12/2019*

I. Honors and Awards

A. International or National Awards

9.	INFORMS Minority Issues Forum Best Paper Award	2024
8.	*IISE Transactions* Focus Issue on Operation Engineering & Analytics, Best Paper	2023
7.	INFORMS Service Science Best Cluster Paper Award, Finalist	2022
6.	IISE Doctoral Colloquium Poster Competition, Award Winner Institute of Industrial & Systems Engineering Annual Meeting, Orlando, FL	2019
5.	INFORMS Judith Liebman Award *Institute for Operations Research and the Management Sciences (INFORMS)* Recognizes students volunteers who who have been "moving spirits" in their universities, student chapters, and the Institute	2018
4.	New England Journal of Medicine SPRINT Data Analysis Challenge, 3ʳᵈ place 3rd place team (out of 143 teams) *Development and Validation of a Clinical Decision Score to Maximize Benefit* *and Minimize Harm from Intensive Blood Pressure Treatment* Team: Sanjay Basu, Jeremy B. Sussman, Joeseph Ridgon, Lauren N. Steimle,	2017

Brian T. Denton, Rodney A. Hayward
Award Amount: $3,000

3.	INFORMS Minority Issues Forum Poster Competition, Honorable Mention	2017
2.	National Science Foundation Graduate Research Fellowship	2016
1.	Ford Foundation Fellowship Predoctoral Competition, Honorable Mention	2016

B. Institute or School Awards

7. ISyE Outstanding Early Career Teaching Award – Assistant Professors, Lecturers, Academic Professionals   2025

6. Student Recognition of Excellence in Teaching, Georgia Tech

Fall Semester 2024 CIOS Honor Roll, ISYE 3232	2024
Fall Semester 2023 CIOS Honor Roll, ISYE 3232	2023
Spring Semester 2023 CIOS Honor Roll, ISYE 3232	2023
Spring Semester 2022 CIOS Honor Roll, ISYE 3232	2022

5. Harold R. and Mary Anne Nash Early Career Professor   2023-2026

4. Georgia Tech's Nominee for Johnson & Johnson's STEM2D Scholar Award   2022
Selected as the institute's nominee in the "Technology" category

3. Thank a Teacher Certificate, Georgia Tech

Received 5 certificates for offerings of ISyE 3232	2021-2024
Received a certificate for offerings of ISyE 6664	2022

2. Social Impact Award   2019
Engineering Graduate Symposium, Advanced Graduate Student Research Division
University of Michigan, Ann Arbor, MI

1. The Gregory Sullivan Award for Professional Achievement   2014
Department of Electrical & Systems Engineering, Washington University in St. Louis
Awarded to an undergraduate student in the Electrical & Systems Engineering department for outstanding professional achievement

C. Selected Honors and Awards Received by Advised PhD Students

10. INFORMS Society on Location Analysis (SOLA) Student Paper Competition, Finalist   2025
Awarded to Ph.D. student Meghan Meredith

9. Outstanding Oral Presentation   2025
Awarded to Ph.D. student Meghan Meredith
Southeast Regional Clinical and Translational Science Conference
Pine Mountain, GA

8. 1st Place Poster Presentation – Public Health   2025
Awarded to Ph.D. student Jingyu Li
Southeast Regional Clinical and Translational Science Conference
Pine Mountain, GA

7.	Chih Foundation Graduate Student Research Publication Award	2024

7. Chih Foundation Graduate Student Research Publication Award   2024
    Awarded to PhD student Meghan Meredith
    The Foundation awards graduate students whose research publication(s)
      reflect invention and innovation for the betterment of society
    One of three $3,000 awards selected from submissions across the
      College of Engineering, College of Computing, and College of Sciences

6. Operations Research/Data Science 3-Minute Thesis Pitch Competition, Runner-Up   2024
    Awarded to Ph.D. student Meghan Meredith
    IISE Annual Meeting Doctoral Colloquium, Montreal, Canada

5. AAAS Student E-poster Competition, Honorable Mention   2024
    Medicine and Public Health Category
    Awarded to Ph.D. student Yuming Sun
    AAAS Annual Meeting, Denver, CO

4. Seth Bonder Scholarship for Applied Operations Research in Health Services   2023
    Awarded to Ph.D. student Yuming Sun

3. INFORMS Minority Issues Forum Poster Competition, 1st Place   2022
    Awarded to Ph.D. student Meghan Meredith
    INFORMS Annual Meeting, Indianapolis, IN

2. National Defense Science and Engineering Graduate (NDSEG) Fellowship   2023-2026
    Awarded to Ph.D. student Abel Sapirstein

1. National Science Foundation Graduate Research Fellowship
    Awarded to Abel Sapirstein (declined award for NDSEG fellowship)   2023-2026
    Awarded to Meghan Meredith   2022-2025

II.   Research, Scholarship, and Creative Activities

Bold: Georgia Tech student/ postdoc author
<u>Underline</u>:   Undergraduate student author
†:   Author order is student(s) followed by advisor (or co-advisors in alphabetical order)
      followed by other contributors.
‡:   Public health/Medical journal convention of senior author as last author.

A.   Refereed Book Chapters

[2] **Amaya McNealey**, Wesley J. Marrero, Lauren N. Steimle, Gian-Gabriel P. Garcia. (2022). "Optimizing Interpretable Treatment and Screening Policies in Healthcare." In: *Encyclopedia of Optimization*. Third, Springer New York.

[1] Lauren N. Steimle, Brian T. Denton. "Markov decision processes for screening and treatment of chronic diseases." In *Markov Decision Processes in Practice*, pp. 189-222. Springer, Cham, 2017.

B. Refereed Publications and Submitted Articles

B.1. Published and Accepted Journal Articles

[17] ‡ **Jingyu Li**, Stephanie M. Radke, Lauren N. Steimle. (2025) "Examining Perinatal Regionalization in Practice: A Network Analysis of Maternal Transport in Georgia." *BMC Health Services Research* 25, 862.

[16] [†] **Abel Sapirstein**, Lauren N. Steimle, Cristina Stefan. (2024) "Towards Expanded Access To Cancer Care With Cost-Awareness: An Optimization Modeling Analysis of Rwanda." *JCO Global Oncology*, 10, e2400022.

[15] [†] **Meghan Meredith**, Lauren N. Steimle, Kaitlyn Stanhope, Marissa Platner, Sheree Boulet. (2024) "Racial/Ethnic Differences in Pre-Pregnancy Conditions and Adverse Maternal Outcomes in the nuMoM2b Cohort." *PLOS One* 19(8): e0306206.

[14] [†] **Meghan Meredith**, Lauren N. Steimle, Stephanie Radke. (2024) "The implications of using maternity care deserts to measure progress in access to obstetric care: a mixed-integer optimization analysis." *BMC Health Services Resesarch*, 24, 682.

- Chih Foundation Graduate Student Research Publication Award, 2024
- Covered by Atlanta News First (Atlanta's local CBS affiliate).[1] This local news television station reaches 1 million homes.
- Covered by the Georgia Tech Research News & highlighted in the Georgia Tech Daily[2]

[13] [†] **Yuming Sun**, Pinar Keskinocak, Lauren N. Steimle, Stephanie Kovacs, Steve Wassilak. (2024) "Outbreak response strategies to eliminate circulating vaccine-derived poliovirus: A case study of Serotype 2 in Northern Nigeria." *Vaccine X* 18 : 100476.

[12] [†]**Emma Wu**, **Hanna Hamilton**, **Liam Jagrowski**, Dima Nazzal, Lauren N. Steimle. (2024) "Revisiting the small-world property of co-enrollment networks: A network analysis of hybrid course delivery strategies." *Socio-Economic Planning Sciences*, 101831.

[11] Gian-Gabriel P. Garcia, Lauren N. Steimle, Wesley J. Marrero Colon, Jeremy B. Sussman. (2024) "Interpretable Policies and the Price of Interpretability in Hypertension Treatment Planning." *Manufacturing and Service Operations Management*,[3] 26(1):80-94.

- 2024 INFORMS Minority Issues Forum Best Paper Award

[10] **Vedant Das Swain**, **Jiajia Xie**, **James Cai**, **Sonia Sargolzaei**, **Maanit Madan**, Munmun De Choudhury, Gregory D. Abowd, Lauren N. Steimle, and B. Aditya Prakash. (2023) "Empirical networks for localized COVID-19 interventions using WiFi infrastructure at university campuses." *Frontiers in Digital Health*, 5, 1060828.

[9] Sheila A.M. Rauch, Lauren N. Steimle, **Jingyu Li**, Kathryn Black, Maria Nylocks, Samantha Patton, Anna Wise, Laura Watkins, Monika Stojek, Jessica Maples-Keller, Carly Yaskinski, Barbara Rothbaum.(2022) "Frequency and correlates of suicidal ideation and behaviors in treatment-seeking post-9/11 veterans." *Journal of Psychiatric Research*, 155: 559-566.

[8] [†] **Mehran Navabi-Shirazi**, **Mohamed El Tonbari**, Natashia Boland, Dima Nazzal, Lauren N. Steimle. (2022) "Multi-criteria Course Mode Selection and Classroom Reassignment Under Sudden Space Scarcity." *Manufacturing & Service Operations Management*,[3] 24(6):3252-3268.

- 2022 INFORMS Service Science Best Cluster Paper Award, Finalist
- Featured in M&SOM's Virtual Special Issue, "The Impact of Operations in the COVID-19 Pandemic"

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[1]https://www.atlantanewsfirst.com/2024/10/18/georgia-tech-researchers-identify-communities-need-ways-fix-states-maternal-mortality-crisis/

[2]https://research.gatech.edu/expanding-access-obstetric-care-georgia-challenges-and-strategies

[3]One of the top-ranking Management Science/Operations Research journals, in FT 50 list

[7] † **Zhuoting Yu**, Pinar Keskinocak, Lauren N. Steimle, Inci Yildirim. (2022) "The Impact of Testing Capacity and Compliance with Isolation on COVID-19: A Mathematical Modeling Study." *AJPM Focus*, 1 100006.

[6] Lauren N. Steimle, **Yuming Sun**, <u>Lauren Johnson</u>, Tibor Besedes, Patricia Mokhtarian, & Dima Nazzal. (2022) "Students' Preferences for Returning to Colleges and Universities During the COVID-19 Pandemic: A Discrete Choice Experiment." *Socio-Economic Planning Sciences* 82PB 101266.

[5] Lauren N. Steimle, Joshua Havumaki, Marissa C. Eisenberg, , Joseph N. Eisenberg, Lisa A. Prosser, Jamison Pike, , Ismael R. Ortega-Sanchez, Claire P. Mattison, Aron Hall, Molly K. Steele, Ben A. Lopman, & David W. Hutton (2021). "Cost-effectiveness of pediatric norovirus vaccination in daycare settings." *Vaccine*, 39(15), 2133-2145.

[4] Lauren N. Steimle, David L. Kaufman, & Brian T. Denton (2021). "Multi-model Markov decision processes." *IISE Transactions*, 53(10), 1124-1139.

- Feature article in Sept. 2021 issue of IISE's *Industrial and Systems Engineer* magazine

[3] Lauren N. Steimle, <u>Vinayak S. Ahluwalia</u>, <u>Charmee Kamdar</u>, & Denton, B. T. (2021). "Decomposition methods for solving Markov decision processes with multiple models of the parameters." *IISE Transactions*, 53(12), 1295-1310.

- Best Paper, 2023 *IISE Transactions* Focus Issue on Operation Engineering & Analytics

[2] <u>Vinayak S. Ahluwalia</u>, Lauren N. Steimle, & Brian T. Denton (2021). "Policy-based branch-and-bound for infinite-horizon Multi-model Markov decision processes." *Computers & Operations Research*, 126, 105108.

[1] Sanjay Basu, Jeremy B. Sussman, Jospeh Rigdon, Lauren N. Steimle, Brian T. Denton, & Rodney A. Hayward (2017). "Benefit and harm of intensive blood pressure treatment: derivation and validation of risk models using data from the SPRINT and ACCORD trials." *PLoS medicine*[4], 14(10), e1002410.

- Cited in the American Diabetes Association's guidelines for cardiovascular disease and risk management, 2020 − 2022

B.2. Conference Presentations with Proceedings (Refereed)

[3] † **Yuming Sun**, **Hongyu Xue**, Pinar Keskinocak, Lauren N. Steimle, Stephanie Kovacs. "Quantifying the impact of prioritizing under-vaccinated populations in poliovirus outbreak response: a model-based study." In *Proceedings of the 2024 Winter Simulation Conference*.

[2] † **Yuming Sun**, Pinar Keskinocak, Lauren N. Steimle, Stephanie Kovacs, Steve Wassilak."A Compartmental Simulation Model to Improve Interventions for Controlling Poliovirus Outbreaks." In *Proceedings of the 2023 Winter Simulation Conference*.

[1] Lauren N. Steimle, David L. Kaufman, Brian .T. Denton, "Multi-model Markov decision processes: A new method for mitigating parameter ambiguity", in *Healthcare Special Interest Group of the Manufacturing and Service Operations Management Conference 2018*.

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[4]2017 Impact Factor: 11.675

B.3. Submitted Journal Articles

[3] **Abel Sapirstein**, Lauren N. Steimle, Mathieu Dahan. "Paving the Way for More Accessible Cancer Care in Low-Income Countries with Optimization." Available at *Optimization Online*.

[2] **Meghan Meredith**, Lauren N. Steimle. "Identifying Regions Vulnerable to Obstetric Unit Closures using Facility Location Modeling with Patient Behavior"

- 2025 INFORMS Society on Location Analysis Student Paper Competition, Finalist

[1] † **Abel Sapirstein**, Lauren N. Steimle, Tuba Ketenci, Kate Williams, Laura Williams. "Teaching Statistics Using Facility Location Modeling: A Course-based Undergraduate Research Experience." Available at *Optimization Online*.

C. Other Publications and Creative Products

C.1. Software and Archived Datasets

[2] COVID-19 Campus Recovery Analytics: Open-source code repository for sharing tools and code to help campus planners make decisions about a return to campus during COVID-19 https://github.com/COVID19-Campus-Recovery/campus-recovery-modeling

- *Socially-distanced classroom layout designer:* A tool for campus planners to create classroom layouts that allow for social distancing. The layouts can help planners better estimate their classrooms' capacities under social distancing policies. This tool has been used by researchers at Georgia Tech and University of Michigan to create classroom layouts and estimate classroom capacities under social distancing policies during the COVID-19 pandemic.
- *Course mode and classroom assignment optimization model*: We are created a tool to help campus planners identify which classes should be assigned to which rooms and alternative modes of course delivery (e.g., hybrid models where some classes are delivered online) in a way that accounts for reduced room capacities (to accomodate social distancing)

[1] Dataset of test instances of Markov decision processes with multiple models [Data set], University of Michigan - Deep Blue Data. https://doi.org/10.7302/2frp-2m36

- This repository includes test instances of infinite-horizon Markov decision processes with multiple models of parameters (i.e., "Multi-model Markov decision processes" (MMDPs)) and was created to enable future research on MMDPs. We generated each test instance in the dataset using a Python script. The test instances can be read in using C++ and Python script.

C.2. Opinion Editorials

[2] Lauren Steimle and Dima Nazzal. "Georgia Tech researchers: Colleges too optimistic about social distancing". The Atlanta Journal-Constitution. June 26, 2020.

[1] Lauren Steimle and Dima Nazzal. "Does a 'return to campus' translate to a return to the classroom?" ORMS Today, August 2020.

C.3. Posters

[20] "Examining Perinatal Regionalization in Practice: A Network Analysis of Maternal Transport in Georgia." Presenter: **Jingyu Li**, Stephanie Radke, Lauren N. Steimle. Southeast Regional Clinical and Translational Science Conference, Pine Mountain, GA, March 2025.

- 1st Place Poster Presentation, Public Health

[19] "Race-blind calculator still disadvantages Black patients." Presenter: **Amaya McNealey**, Other co-authors: **Meghan E. Meredith**, Lauren N. Steimle, Gian-Gabriel P. Garcia, Kathryn K. Stanhope, Marissa H. Platner, Sheree L. Boulet. INFORMS Annual Meeting. Seattle, WA, October 2024.

- Honorable Mention, Minority Issues Forum Poster Competition

[18] "Favorability for vaginal birth after Cesarean among Black women using a new race-blind risk calculator." Presenter: **Amaya McNealey**, Other co-authors: **Meghan E. Meredith**, Lauren N. Steimle, Gian-Gabriel P. Garcia, Kathryn K. Stanhope, Marissa H. Platner, Sheree L. Boulet. Southeast Regional Clinical and Translational Science Conference, Pine Mountain, GA, February 2024.

[17] "Modeling the circulating vaccine-derived poliovirus outbreaks and interventions."; Presenter: **Yuming Sun**. Other co-authors: Pinar Keskinocak, Lauren N. Steimle, Stephanie Kovacs, and Steven Wassilak. 2024 American Association for the Advancement of Science (AAAS) Annual Meeting, Denver, CO, February 16, 2024.

- Honorable Mention, Student E-poster Competition in Medicine and Public Health

[16] "Modeling the spread of circulating vaccine-derived poliovirus type 2 outbreaks and interventions." Health Systems: The Next Generation 2023 Forum, Atlanta, GA, October 31, 2023. Presenter: **Yuming Sun**. Other co-authors: Pinar Keskinocak, Lauren N. Steimle, Stephanie Kovacs, and Steven Wassilak.

[15] "Modeling the spread of circulating vaccine-derived poliovirus type 2 outbreaks and interventions." Society for Medical Decision Making 45th Annual North American Meeting, Philadelphia, PA, October 22, 2023. Presenter: **Yuming Sun**. Other co-authors: Pinar Keskinocak, Lauren N. Steimle, Stephanie Kovacs, and Steven Wassilak.

[14] "Modeling the Spread of Circulating Vaccine-Derived Poliovirus Type 2 Outbreaks and Interventions." Presenter: **Yuming Sun**. Other co-authors: Lauren N. Steimle, Pinar Keskinocak, Stephanie Kovacs, Steve Wassilak. INFORMS Annual Meeting, Phoenix, AZ, October 15, 2023.

[13] "Informing the Elimination of Poliovirus Outbreaks with a Comprehensive Simulation Model." Presenter: **Yuming Sun**. Other co-authors: Pinar Keskinocak, Lauren N. Steimle, Stephanie Kovacs, Steve Wassilak. Winter Simulation Conference, 2023.

[12] "Design, Analysis, and Optimization of Interpretable Policies for Hypertension Treatment Planning." Presenter: G.-G. P. Garcia. Other co-authors: W. J. Marrero, and J. B. Sussman. Society for Medical Decision Making 44th Annual Meeting, Seattle, WA. October 2022.

[11] "Data Science Models for the Prediction of Adverse Maternal Outcomes". Presenter: **Meghan Meredith**. Other co-authors: Sheree Boulet, Kait Stanhope, Marissa Platner. INFORMS Annual Meeting, Indianapolis, IN. October 2022.

- 1st place, Minority Issues Forum Poster Competition

[10] "The implication of state aggregation in Markov decision processes with medical applications". Presenter: **Madeleine Pollack**. INFORMS Annual Meeting, Indianapolis, IN. October 2022.

[9] "The implication of state aggregation in Markov decision processes with medical applications". Presenter: **Madeleine Pollack**. 2021 SWE National Conference (Virtual). October 2021. Finalist, Undergraduate Poster Competition.

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[8] "The implication of state aggregation in Markov decision processes with medical applications". Presenter: **Madeleine Pollack**. 2021 IEEE MIT Undergraduate Technology Research Conference (URTC). October 2021.

[7] "The implication of state aggregation in Markov decision processes with medical applications". Presenter: **Madeleine Pollack**. Georgia Institute of Technology Undergraduate Research Symposium. April 2021.

- 3rd place, College of Engineering Poster Competition

[6] "Stochastic dynamic optimization under ambiguity". Co-Author: Brian Denton. Invited Poster for the *Institute for Industrial and Systems Engineering Doctoral Colloquium*. May 2019.

- 3rd place, Doctoral Colloquium Poster Competition

[5] "Data-Driven Sequential Decision Making under Data Uncertainty and Model Ambiguity with Applications to Medical Decision Making". Co-Author: Brian Denton. University of Michigan Engineering Graduate Symposium, Ann Arbor, MI. October 2018.

- Winner, Social Impact Award, Advanced Graduate Research Competition

[4] "Stochastic dynamic optimization under ambiguity with applications to medical decision making". Co-Authors: Brian Denton & David Kaufman. Minority Issues Forum, INFORMS Annual Meeting, Phoenix, AZ. October 2018.

[3] "Mitigating ambiguity in Markov decision processes using multiple models of parameters". Co-Authors: Brian Denton & David Kaufman. Michigan Student Symposium for Interdisciplinary Statistical Sciences. October 2017.

[2] "Mitigating ambiguity in Markov decision processes using multiple models of parameters". Co-Authors: Brian Denton & David Kaufman. Minority Issues Forum, INFORMS Annual Meeting, Houston, TX. October 2017.

- Honorable Mention, Minority Issues Forum Poster Competition

[1] "Contextual Markov decision processes for robust dynamic programming". Co-Authors: Brian Denton & David Kaufman. Engineering Graduate Symposium, University of Michigan, Ann Arbor, MI. November 2016.

C.4. Dissertations

[1] Lauren N. Steimle, "Stochastic dynamic optimization under ambiguity", Ph.D. Dissertation, Industrial and Operations Engineering, University of Michigan, 5/2019.

D. Presentations

D.1. Keynote Addresses and Plenary Lectures

[2] "Examining systems of risk-appropriate maternal care with mathematical modeling." Panel on AI for Maternal Health, Workshop on AI for Maternal and Child Health (AI4MCH). Georgia Tech and Emory University, April 1st, 2025.

[1] "Leveraging problem structure to solve robust Markov decision processes." YinzOR Student Conference, Pittsburgh, PA, August 2018. Presented as PhD student.

D.2. Invited Conference and Workshop Presentations

[49] "Identifying Regions that are Vulnerable to Obstetric Unit Closures in Georgia Using Mathematical Optimization." Presenter: **Meghan E. Meredith**. Other co-authors: Lauren N. Steimle. Southeast Regional Clinical and Translational Science Conference, Pine Mountain, GA, March 2025.

- Outstanding Oral Presentation Award

[48] "Preventing Rural Obstetric Hospital Closures: a Multi-Level Optimization Approach." Presenter: **Meghan E. Meredith**. Other co-authors: Lauren N. Steimle. INFORMS Annual Meeting, Seattle, WA, October 2024.

[47] "Designing Tertiary Cancer Services Under Burden Uncertainty." Presenter: **Abel Sapirstein**. Other co-authors: Lauren N. Steimle, Mathieu Dahan. INFORMS Annual Meeting, Seattle, WA, October 2024.

[46] "Quantifying the Impact of Vaccinating Under-Immunized Groups in Polio Outbreak Responses: a Model-Based Study." Presenter: **Yuming Sun**. Other co-authors: Hongyu Xue, Pinar Keskinocak, Lauren N. Steimle. INFORMS Annual Meeting, Seattle, WA, October 2024.

[45] "Race Neutral Calculator Still Disadvantages Black Patients." Presented by: **Amaya K. McNealey**. Other co-authors: **Meghan Meredith**, G.-G. P. Garcia, S. L. Boulet, K. K. Stanhope, M. H. Platner, and L. N. Steimle. INFORMS Annual Meeting, Seattle, WA, October 2024.

[44] "Systems science methods to forecast the potential impact of hospital closures on geographic access and obstetric volume." Presenter: Lauren N. Steimle. Co-author: **Meghan Meredith**. CityMatCH Leadership and Maternal Child Health Epidemiology Conference, Seattle, WA, September 2024.

[43] "Mathematical modeling of obstetric unit closures: From the descriptive to the prescriptive." Presenter: Lauren N. Steimle. Harvard University Center for Research on Computation and Society Workshop on Computing for Population Maternal and Child Health. Boston, MA, April 2024.

[42] "Race-Blind Calculator Still Disadvantages Black Patients." Presenter: **Amaya K. McNealey**. Other co-authors: **Meghan Meredith**, Gian Garcia, Kait K. Stanhope, Marissa H. Platner, Sheree L. Boulet, Lauren N. Steimle. Emerging Researchers National Conference in STEM, Washington D.C. March 14-17th, 2024.

- 1st Place Graduate Oral Presentation, Data Science, Physiology, and Health.

[41] "Modeling the circulating vaccine-derived poliovirus outbreaks and interventions." Presenter: **Yuming Sun**. Other co-authors: Lauren N. Steimle, Pinar Keskinocak, Stephanie Kovacs, Steve Wassilak. 2024 American Association for the Advancement of Science (AAAS) Annual Meeting, Denver, CO, February 16, 2024

[40] "A model-based study of preventions and outbreak response options to eliminate circulating vaccine-derived poliovirus type 2." Presenter: **Yuming Sun**. Other co-authors: Lauren N. Steimle, Pinar Keskinocak, Stephanie Kovacs, Steve Wassilak. 2024 Healthcare Systems Process Improvement Conference, Atlanta, GA, February 14, 2024

[39] "Towards the Three 'Rights' and Three 'E's: Industrial Engineering to Improve Healthcare Delivery." Health Systems - The Next Generation Forum 2023, Georgia Tech. October 31, 2023. Presenter: Lauren N. Steimle.

[38] "Multi-Criteria Optimization to Balance Quality and Access for Risk-Appropriate Maternity Care". Presenter: **Meghan Meredith**. Other co-authors: Lauren N. Steimle. INFORMS Annual Meeting, Phoenix, AZ, October 2023.

[37] "Modeling the Vaccination Interventions to Control the Spread of Circulating Vaccine-Derived Poliovirus Type 2 Outbreaks." Presenter: **Yuming Sun**. Other co-authors: Lauren N. Steimle, Pinar Keskinocak, Stephanie Kovacs, Steve Wassilak. INFORMS Annual Meeting, Phoenix, AZ, October 2023.

[36] "Interpretable Policy Design with Application to Hypertension Treatment Planning." Presenter: Gian-Gabriel Garcia. Other co-authors: Lauren N. Steimle, Wesley Marrero-Colon, Jeremy B. Sussman. INFORMS Annual Meeting, Phoenix, AZ, October 2023.

[35] "A POMDP Approach to Develop Anal Cancer Screening Recommendations." Presenter: **Jingyu Li**. Other co-authors: Lauren N. Steimle. INFORMS Annual Meeting, Phoenix, AZ, October 2023.

[34] " Interpretable Policies and the Price of Interpretability in Hypertension Treatment Planning." Presenter: Gian-Gabriel Garcia. Other co-authors: Lauren N. Steimle, Wesley Marrero-Colon, Jeremy B. Sussman. INFORMS Annual Meeting, Phoenix, AZ, October 2023.

[33] "Improving Equity in Access Through Network Design: A Case Study of Specialist Cancer Care in Rwanda." Presenter: **Abel Sapirstein**, Other co-authors: Lauren N. Steimle, Cristina Stefan. INFORMS Annual Meeting, Phoenix, AZ, October 2023.

[32] "A Model-based Study to Inform Prevention and Outbreak Response Strategies to Eliminate Circulating Vaccine-derived Poliovirus Type 2." Presenter: Lauren N. Steimle. Other co-authors: **Yuming Sun**, Pinar Keskinocak, Stephanie Kovacs. INFORMS Healthcare Conference, Toronto, Canada, July 2023.

[31] "Equitable Access to Specialist Cancer Care in Rwanda: A Network Design Approach" Presenter: **Abel Sapirstein**. INFORMS Healthcare Conference, Toronto, Canada, July 2023

[30] "Decomposition Methods for Markov Decision Processes with Multiple Models of the Parameters." Presenter: Lauren N. Steimle. Other co-authors: Brian Denton, David Kaufman. IISE Annual Meeting, New Orleans, LA, May 2023.

[29] "A Model-based Study to Inform Prevention and Outbreak Response Strategies to Eliminate Circulating Vaccine-derived Poliovirus Type 2." Presenter: Lauren N. Steimle. Other co-authors: **Yuming Sun**, Pinar Keskinocak, Stephanie Kovacs. IISE Annual Meeting, New Orleans, LA, May 2023.

[28] "Multi-criteria Course Mode Selection and Classroom Assignment Under Sudden Space Scarcity" Presenter: Lauren N. Steimle. Co-authors: **Mehran Navabi-Shirazi**, **Mohamed El Tonbari**, Dima Nazzal, Natashia Boland. INFORMS Annual Meeting, Indianapolis, IN, October 2022

[27] "A Model-based Study Of Preventions And Outbreak Response Options To Eliminate Circulating Vaccine-derived Poliovirus Type 2" Presenter: **Yuming Sun**. Co-authors: Pinar Keskinocak, Stephanie Kovacs, Lauren N. Steimle. INFORMS Annual Meeting, Indianapolis, IN, 2022.

[26] "Machine Learning To Estimate Risk Of Adverse Maternal Outcomes In A Cohort Of Nulliparous Women" Presenter: Lauren N. Steimle. Co-author: **Meghan Meredith**. INFORMS Annual Meeting, Indianapolis, IN, October 2022.

[25] "Design And Analysis Of Interpretable Policies For Hypertension Treatment Planning". Presenter: Gian-Gabriel P. Garcia. Co-authors: G Wesley J. Marrero, Jeremy B. Sussman, Lauren N. Steimle. INFORMS Annual Meeting, Indianapolis, IN, October 2022.

[24] "Helping Colleges Respond To COVID-19: Multi-objective Optimization To Address Sudden Classroom Space Scarcity Due To Social Distancing" Presenter: Lauren N. Steimle. Co-authors: **Mehran Navabi-Shirazi**, **Mohamed El Tonbari**, Dima Nazzal, Natashia Boland. 2022 CORS/INFORMS International Conference, Vancouver, CA, June 2022.

[23] "Strategies for the mitigation of statistical error in Markov decision processes for medical treatment decisions". Presenter: **Madeleine Pollack**. Co-authors: Lauren N. Steimle. IISE Annual Meeting, Seattle, WA. May, 2022.

[22] "An Analysis of Structured Optimal Policies for Hypertension Treatment Planning: The Trade-off Between Optimality and Interpretability". Presenter: Gian-Gabriel P. Garcia. Co-authors: Wesley J. Marrero-Colon, Lauren N. Steimle. Jeremy Sussman. IISE Annual Meeting, Seattle, WA. May, 2022.

[21] "Strategies for responding to vaccine-derived polio outbreaks". Presenter: **Yuming Sun**. Co-authors: Pinar Keskinocak, Lauren N. Steimle. INFORMS Annual Meeting, Anaheim, CA. October 2021.

[20] "The Effectiveness Of Remote And Hybrid Instruction As An Intervention For Covid-19 In University Settings". Presenter: Lauren N. Steimle. Co-authors: **Jingyu Li**, **Meghan Meredith**, Dima Nazzal. INFORMS Annual Meeting, Anaheim, CA. October 2021.

[19] "Multi-criteria Course Mode Selection and Classroom Reallocation during a Sudden Pandemic". Presenter: Lauren N. Steimle. Co-authors: **Mohamed El Tonbari**, **Mehran Navabi-Shirazi**, Dima Nazzal, Natashia Boland. INFORMS Annual Meeting, Anaheim, CA. October 2021.

[18] "An Analysis of Structured Optimal Policies for Hypertension Treatment Planning: The Trade-off Between Optimality and Interpretability". Presenter: Gian-Gabriel P. Garcia. Co-authors: Wesley J. Marrero-Colon, Lauren N. Steimle. INFORMS Annual Meeting, Anaheim, CA. October 2021.

[17] "An Analysis of Structured Optimal Policies for Hypertension Treatment Planning: The Trade-off Between Optimality and Interpretability". Presenter: Gian-Gabriel P. Garcia. Other co-authors: Wesley J. Marrero-Colon, Lauren N. Steimle. INFORMS Healthcare Meeting, Indianapolis, IN. July 2021.

[16] "The Impact of Testing Availability and Compliance with Self-isolation on Covid-19: A Mathematical Modeling Study". Presenter: **Zhuoting Yu**. Other co-authors: Lauren N. Steimle, Pinar Keskinocak. INFORMS Healthcare Meeting, Indianapolis, IN, July 2021.

[15] "Cost-Effectiveness of a Potential Norovirus Vaccine". Presenter: Lauren N. Steimle. IISE Annual Meeting, Virtual (due to COVID-19). October 2020.

[14] "Sensitivity of Preventive Decisions for Deteriorating Markovian Systems". Presenter: Lauren N. Steimle Other co-author: Brian Denton. INFORMS Annual Meeting, Seattle, WA. October 2019.

[13] "A branch-and-bound framework for infinite-horizon multi-model Markov decision processes". Presenter: Vinayak Ahluwalia. Co-Authors: Brian Denton and Lauren N. Steimle. INFORMS Annual Meeting, Seattle, WA. October 2019.

- Honorable Mention, *INFORMS Undergraduate Operations Research Prize*

[12] "Cost-Effectiveness of a Potential Norovirus Vaccine". Presenter: David Hutton. Co-Authors: Lauren N. Steimle. INFORMS Annual Meeting, Seattle, WA. October 2019.

[11] "Cost-Effectiveness of a Potential Norovirus Vaccine". Presenter: David Hutton. Co-Authors: Lauren N. Steimle. INFORMS Healthcare, Cambridge, MA. July 2019.

[10] "Sensitivity of Preventive Health Intervention Decisions in Markov Decision Processes". Presenter: Lauren N. Steimle. Co-authors: Brian Denton. INFORMS Healthcare, Cambridge, MA. July 2019.

[9] "Decomposition methods to design robust policies for Markov decision processes". Presenter: Lauren N. Steimle. Co-authors: Brian Denton. Institute for Industrial and Systems Engineers Annual Meeting, Orlando FL. May 2019.

[8] "Leveraging decomposition methods to design robust policies for Markov decision processes". Presenter: Lauren N. Steimle. Co-authors: Brian Denton. INFORMS Annual Meeting, Phoenix, AZ. October 2018.

[7] "Leveraging stochastic programming to design robust policies for Markov decision processes". Presenter: Lauren N. Steimle. Co-authors: Brian Denton. International Symposium on Mathematical Programming, Bordeaux, France. July 2018.

[6] "Multi-model Markov decision processes: A new method for mitigating parameter ambiguity". Presenter: David Kaufman;. Co-authors: Brian Denton and Lauren N. Steimle. Healthcare Special Interest Group. Manufacturing and Service Operations Management Conference, Houston, TX. July 2018.

[5] "Mitigating ambiguity in Markov decision processes using multiple models of parameters". Presenter: Lauren N. Steimle. Co-authors: Brian Denton. and David Kaufman. INFORMS Annual Meeting, Houston, TX. October 2017.

[4] "Optimizing medical treatment decisions for the prevention of heart attack and stroke". Presenter: Lauren N. Steimle. Co-Authors: Weiyu Li, Jeremy Sussman, Rod Hayward, & Brian Denton. INFORMS Healthcare, Rotterdam, Netherlands. July 2017.

[3] "Robust Dynamic Programming Under Contextual Uncertainty About Model Parameters". Presenter: Lauren N. Steimle. Co-authors: Brian Denton & David Kaufman. INFORMS Computing Society Conference, Austin, TX. January 2017.

[2] "Robust dynamic programming for medical decision making". Presenter: Lauren N. Steimle. Co-authors: Brian Denton & David Kaufman. INFORMS Annual Meeting, Nashville, TN. November 2016.

[1] "Robustness of Markov decision processes for medical treatment decisions". Presenter: Lauren N. Steimle. Co-authors: Brian Denton. INFORMS Annual Meeting, Philadelphia, PA. November 2015.

D.3. Invited Seminar Presentations

[16] "Identifying regions vulnerable to obstetric unit closures using facility location modeling with patient behavior." University of Wisconsin-Madison, Department of Industrial and Systems Engineering. May 22nd, 2025.

[15] "Reaching under-vaccinated children with additional rounds to stop persistent cVDPV2 outbreaks." Presenter: **Yuming Sun**. Other co-authors: Pinar Keskinocak, Stephanie Kovacs, Lauren N. Steimle. Polio In-Depth Seminar Series, CDC's Global Immunization Division - Polio Eradication Branch. May 5, 2025.

[14] "Identifying regions vulnerable to obstetric unit closures using facility location modeling with patient choice." University of Michigan, Department of Industrial and Operations Engineering. April 17th, 2025.

[13] "Examining systems of risk-appropriate maternal care with systems science" Maternal Health Research Center Speaker Series organized by the University of Illinois Chicago's Maternal Health Research Center of Excellence and the Illinois Maternal Health Innovation Program's Learning Collective. April 3rd, 2025.

[12] Examining Perinatal Regionalization in Practice: A Network Analysis of Maternal Transport in Georgia. Centers for Disease Control and Prevention (CDC)'s Obstetric Facility Closure Working Group. October 15th, 2024.

[11] Mathematical modeling of obstetric unit closures: From the descriptive to the prescriptive. Maternal, Child, and Adolescent Health (MCAH) team within Nevada's Department of Health and Human Services. June 17, 2024.

[10] Mathematical modeling of obstetric unit closures: From the descriptive to the prescriptive. CDC's Obstetric Facility Closure Working Group. May 21st, 2024.

[9] Informing Polio Eradication through an Integrated Operations Research Modeling Frameworks. CDC's Polio In-Depth Seminar. Presented by PhD student: **Yuming Sun**. Co-authors: Lauren N. Steimle, Pinar Keskinocak.

[8] Designing Academic Operations for the Return to Georgia Tech during the COVID-19 Pandemic. University of Chicago Booth Business School, Operations & Management Science Seminar. February 20, 2024.

[7] Designing Academic Operations for the Return to Georgia Tech during the COVID-19 Pandemic. MIT Sloan School of Management, Operations Management Seminar. November 13, 2023.

[6] Multi-Criteria Optimization to Inform Colleges' Academic Operations Response to COVID-19. Northwestern University, Center for Engineering and Health. June 12, 2023.

[5] Multi-Criteria Optimization to Inform Colleges' Academic Operations Response to COVID-19. INFORMS Junior Faculty Interest Group Early-Career Researchers Webinar Series. December 16, 2022.

[4] Sequential decision-making under ambiguity with applications to chronic disease management, Graduate Seminar Series, School of Industrial and Systems Engineering, University of Oklahoma, November 11, 2020.

[3] Sequential decision-making under ambiguity with applications to chronic disease management, Department of Industrial and Systems Engineering, Virginia Tech, December 2018.

[2] Sequential decision-making under ambiguity with applications to chronic disease management, Department of Industrial and Systems Engineering, University of Minnesota, December 2018.

[1] Sequential decision-making under ambiguity with applications to chronic disease management, H. Milton School of Industrial and Systems Engineering, Georgia Tech, December 2018.

D.4. Other Presentations

[7] "Mathematical Modeling & Analytics to Improve Population Health." Invited Talk to ISyE Staff as part of the ISyE Lunch & Learn Series. January 29, 2025.

[6] ISyE Chair's Donor Appreciation Luncheon, March 2024. "Towards the Three 'Rights' and Three 'E's: Industrial Engineering to Improve Healthcare Delivery."

[5] "Towards the Three 'Rights' & Three 'E's: Industrial Engineering to Improve Healthcare Delivery."
Invited Presentation to: Alpha Pi Mu Chapter, Georgia Tech.
Date: November 29, 2023.

[4] "Modeling the Spread of Circulating Vaccine-Derived Poliovirus Type 2 Outbreaks".
Invited presentation to: The Global Polio Eradication Initiative's Subgroup for Modeling & Analytics
Date: August 3rd, 2023.
Topic: Discussed an overview of modeling efforts to inform outbreak response to vaccine-derived poliovirus outbreaks

[3] "Modeling the spread of circulating vaccine-derived poliovirus type 2 outbreaks: A case study of northern Nigeria." CDC Global Immunization Division Seminar, Atlanta, GA, July 15, 2022; Presenter: **Yuming Sun**. Other co-authors: Pinar Keskinocak, Lauren N. Steimle, Stephanie Kovacs, and Steven Wassilak.

[2] "Analytics for college campus operations during the COVID-19 pandemic"
Presented to: The ISyE Advisory Board
Date: April 22nd, 2021

[1] "Analytics for Return-to-Campus Decisions to Mitigate COVID-19 Risk".
Presented to: Georgia Department of Public Health & Georgia Department of Education

- Garry McGiboney, Deputy Superintendent of Policy at Georgia Department of Education
- Laura Edison, Georgia Department of Public Health
- Arianna Weldone, Director, Get Georgia Reading Campaign
- Susan Miller, Georgia Geospatial Information Office

Date: June 16, 2020
Summary: Presented research related to reopening schools during the COVID-19 pandemic.

E. Grants and Contracts

E.1. As Principal Investigator

6. Group model building to identify strategies for addressing cardiovascular severe maternal morbidity in Atlanta, Georgia

Agency/Company:	Georgia Health Initiative
Role:	PI
Collaborators:	Sheree Boulet, Boston Medical Center (Co-PI)
	Suchitra Chandrasekaran, Emory University (Co-PI)
	Anna Newton-Levinson, Emory University (Co-PI)
Amount:	$205,036
Share:	$101,058 ($\sim$ 49%)
Period of Contract:	4/1/2025-7/31/2026

5. Characterizing Utilization of Regionalized Systems of Maternal Care: New Multi-Level Datasets and Modeling Approaches

      Agency/Company: Georgia CTSA through NIH award UL1-TR002378
                               Biostatistics, Epidemiology, and Research Design Program
      Role: PI
      Amount: $26,145
      Share: $26,145 (100%)
      Period of Contract: 8/1/2024-7/31/2025

4. CURE: Integrating an Optimization Research Experience into an Undergraduate Probability and Statistics Course

      Agency/Company: Georgia Tech Center for Teaching and Learning
                               Transformative Teaching & Learning Innovation Incubator
      Total Dollar Amount: $11,275
      Role: PI
      Collaborators: Tuba Ketenci (Academic Professional)
      Period of Contract: 4/1/2024-3/31/2025

3. Designing a Data-driven and Risk-specific Approach to Maternal Care

      Agency/Company: Imagine, Innovate, and Impact (I^3)
                               Emory School of Medicine/Georgia Tech Research Awards
      Total Dollar Amount: $100,000
      Role: PI
      Collaborators: Gian-Gabriel Garcia (Georgia Tech PI),
                               Sheree Boulet (Emory PI)
                               Marissa Platner (Emory co-PI)
      Share: $35,000 (35%)
      Period of Contract: 1/1/2022-12/31/2022

2. Analytics for Return-to-Campus Decisions to Mitigate COVID-19 Risk

      Agency/Company: Georgia Tech ISYE Thos and Clair Muller
                               Research Endowment Fund
      Total Dollar Amount: $10,000
      Share: $10,000 (100%)

      Role: PI
      Period of Contract: 7/1/2020-6/31/2021

1. Analytics for Return-to-Campus Decisions to Mitigate COVID-19 Risk

      Agency/Company: Georgia Tech, EVPR COVID-19 Rapid Response
                               Seed Grant Program
      Total Dollar Amount: $9,000
      Role: PI
      Period of Contract: 7/1/2020-6/31/2021
      Share: $9,000 (100%)

E.2. As Co-Principal Investigator

3. SCC-PG: Optimizing sociotechnical interventions for healthcare access using community sensing

Agency/Company:	National Science Foundation
Role:	Co-PI
Collaborators:	Arthi Rao (PI),
	Neda Mohammadi (Co-PI)
Amount:	$149,982
Share:	$13,444 (∼9%)
Period of Contract:	2024-2025

2. Informing Global Polio Eradication Efforts Through Innovative Modeling Approaches

Agency/Company:	Centers for Disease Control and Prevention
Role:	co-PI
Collaborators:	Pinar Keskinocak (PI), Walter Orenstein (Emory co-PI)
Amount:	$875,000
Share:	$393,000 (∼45%)
Period of Contract:	09/2022–09/2027

1. From Data to Action: Optimizing Hospitals' Community Investments to Improve Social Determinants of Health

Agency/Company:	GT Building Teams and Moving Teams Forward Seed Grant
Total Dollar Amount:	$89,055
Role:	Co-PI
Collaborators:	Arthi Rao (PI)
Share:	$45,000 (50%)
Period of Contract:	8/1/2021-6/31/2022

F. Societal and Policy Impacts

1. My group's research on access to obstetric care in Georgia was covered by the television station *Atlanta News First* (Atlanta's local CBS affiliate). This local news television station reaches 1 million homes.

   - `https://www.atlantanewsfirst.com/2024/10/18/georgia-tech-researchers-identify-communities-need-ways-fix-states-maternal-mortality-crisis/`

2. Invited to present my work multiple times to the CDC's InfoShare and Coordination Meeting for the Obstetric Facilities Closure Working Group. The group was formed by by Dr. Romeo Galang, Chief Medical Officer of the National Center for Chronic Disease Prevention and Health Promotion. This working group brings together around 40 people across CDC's divisions, as well as CDC assignees to the states, to maintain awareness and discuss the latest work about this growing issue.

   - "Examining Perinatal Regionalization in Practice: A Network Analysis of Maternal Transport in Georgia." October 15th, 2024.
   - "Mathematical modeling of obstetric unit closures: From the descriptive to the prescriptive." May 21st, 2024.

3. Research covered by the Georgia Tech Daily Digest in an article "Expanding Access to Obstetric Care in Georgia: Challenges and Strategies." July 12, 2024

   - `https://research.gatech.edu/expanding-access-obstetric-care-georgia-challenges-and-strategies`

4. Presented my work "Mathematical modeling of obstetric unit closures: From the descriptive to the prescriptive" to Romeo Galang (Senior Medical Officer, Emergency Preparedness and Response Team) & his team within the CDC's Division of Reproductive Health. (Invited; April 28, 2024)

5. Presented to the Global Polio Eradication Initiative's Subgroup on Modeling and Analytics. August, 2023.

6. Presented Georgia Department of Public Health and Georgia Department of Education about research related to reopening schools during the COVID-19 pandemic. June 2020.

7. Wrote several opinion editorials about operational challenges in returning to college campuses during the COVID-19 pandemic. (CV Items C.2.1 & C.2.2)

8. Disseminate findings on Twitter to around 1000 followers.

G. Other Professional Activities

- Georgia Clinical & Translational Science Alliance TEAMS (Translational Education and Mentoring in Science) Fellow, 2022-2023

- Invited "Core Participant" for the NSF Predicting emergence of Virulent Entities by Novel Technologies (PREVENT) Symposium, February 21-22, 2021

III. Education

A. Courses Taught

Sem., Year	Course Number	Course Title	Course Size	Eval.*
FL24	ISyE 3232	Stochastic Manufacturing and Service Systems	60	4.77
FL24	ISyE 3232	Stochastic Manufacturing and Service Systems	75	4.81
SP24	ISyE 8803	Methods for Decision-Making in Health and Medicine	9	4.83
FL23	ISyE 3232	Stochastic Manufacturing and Service Systems	57	4.89
FL23	ISyE 3232	Stochastic Manufacturing and Service Systems	75	4.83
SP23	ISyE 3232	Stochastic Manufacturing and Service Systems	57	4.90
FL22	ISyE 6664	Stochastic Optimization	32	4.88
SP22	ISyE 3232	Stochastic Manufacturing and Service Systems	81	4.91
SP22	ISyE 3232	Stochastic Manufacturing and Service Systems	63	4.88
FL20	ISyE 3232	Stochastic Manufacturing and Service Systems	46	4.87
FL20	ISyE 3232	Stochastic Manufacturing and Service Systems	68	4.88
SP20	ISyE 8803	Methods for Decision-making in Health and Medicine	8	–
FL17	IOE 202**	Operations Modeling	138	3.60

* For courses taught at Georgia Tech, the evaluation is based on the interpolated median for the survey item: "Considering everything, the instructor was an effective teacher" (maximum score of 5). For courses taught at the University of Michigan, the overall score reflects the median for the survey item: "Overall, the instructor was an effective teacher" (maximum score of 5).

** Course taught at the University of Michigan as the instructor of record as a graduate student.

B. Individual Student Guidance

† Awards recognizing research that I advised.
‡ Awards/positions for which I nominated the student or wrote a letter of support.

B.1. Postdoctoral Fellows

1. Evangelia Gergatsouli
   Program: ARC/ISyE
   Advising Start Date: Fall 2024

B.2. Ph.D. Students

B.2.a Graduated

1. Meghan Meredith
   Degree: PhD in Operations Research, Spring 2025
   Advising Start Date: Fall 2020
   Thesis Title: *Operations Research for Improved and Equitable Maternal Health*
   First position: Postdoctoral Fellow, New York University Langone Health
                               Center for Surgical and Transplant Applied Research
   Honors and Awards: SOLA Student Paper Competition, Finalist 2025[†]
                               INFORMS Society on Location Analysis (SOLA)
                           Outstanding Oral Presentation, 2025[†]
                               Southeast Regional Clinical & Translational Science Conference
                           Fall 2024 CIOS Honor Roll – ISYE 3133: Engineering Optimization
                           Chih Foundation Graduate Student Research Publication Award [†‡]
                           OR/Data Science 3-Minute Thesis Pitch Competition, Runner-Up[†]
                               IISE Annual Meeting Doctoral Colloquium, 2024
                           Schmidt Science Fellowship - Georgia Tech Nominee, 2024‡
                           WiscProf: Future Faculty Development Program, 2024
                           IISE Doctoral Colloquium Participant, 2024 [‡]
                           PEO Scholar Award – Georgia Chapter Nominee 2023[†‡]
                           National Science Foundation Graduate Research Fellowship, 2022[†‡]
                               Amount: $138,000; Period: 2022-2025
                           Minority Issues Forum Poster Competition, 1st Place [†]
                               INFORMS Annual Meeting, 2022
                           Master Modeler Competition, 2nd Place, 2022
                           Georgia HIMSS David Cowan Scholarship, 2021 [‡]
                           ISyE George Family Foundation Fellowship, 2021[‡]
   Internships: RAND Summer Associate, 2023 [‡]

B.2.b. In Process

1. Yuming Sun
   Co-Advisor: Pinar Keskinocak
   Degree Program: Operations Research
   Advising Start Date: Spring 2021
   Tentative Thesis Title: *Informing Polio Eradication with an Integrated Operations Research Modeling Framework*
   Milestones: Comprehensive Examination, Fall 2022
   Honors and Awards: Thos and Claire Muller PhD Student Fellowship

for Research Excellence in Health Analytics and Health Systems

AAAS 2024 Student E-poster Competition, Honorable Mention[†]
Category: Medicine and Public Health

INFORMS Seth Bonder Scholarship for Applied Operations Research in Health Services, 2023[†‡]

George Family Foundation Fellowship[‡]

2. Jingyu Li

Degree Program:	Industrial Engineering
Advising Start Date:	Fall 2020
Milestones:	Comprehensive Examination, Fall 2022
Honors and Awards:	1st Place Public Health Poster Presentation Health, 2025[†]
	Southeast Regional Clinical & Translational Science Conference
	Georgia HIMSS David Cowan Scholarship, 2023 [‡]
	Stewart Fellowship[‡], Fall 20202025.[†‡]
	George Family Foundation Fellowship, Spring 2022[‡]

3. Abel Sapirstein

Degree Program:	Operations Research
Advising Start Date:	Fall 2021
Honors and Awards:	WiscProf: Future Faculty Development Program, 2025[‡]
	National Defense Science and Engineering Graduate Fellowship, 2023[†‡]
	Amount: $129,600; Period: 2023-2026
	National Science Foundation Graduate Research Fellowship, 2023[†‡]
	(Declined NSF GRFP to receive the NDSEG Fellowship)
	George Family Foundation Fellowship, 2023, 2024[‡]
	Watson Fellowship, 2022-2023

4. Riley Byrd

Degree Program:	Operations Research
Advising Start Date:	Fall 2025

B.3. M.S. Students

- **Graduated**

  2. Taehoon Kim

Co-advisor:	Pinar Keskinocak
Graduation:	May 2024

  1. Jiajia Xie

Thesis:	Modeling Covid-19 on campus using WiFi-based mobility data for policy evaluation and contact-tracing
Co-advisor:	B. Aditya Prakash
Graduation:	May 2021
Position after advising :	Ph.D. student, Civil and Environmental Engineering, Georgia Tech

- **Additional M.S. Students Advised on At Least One Project**

  10. Hengyi Hu

Graduation:	December 2022
Position after advising :	Ph.D. student, Industrial Engineering, Northwestern University

9. Yogesh Avhad
   Advising period: Summer 2020
   Project: Analytics for Return-to-Campus Decisions to Mitigate COVID-19 Risk

8. Raneem Gashgari
   Advising period: Summer 2020
   Project: Analytics for Return-to-Campus Decisions to Mitigate COVID-19 Risk

7. Hanna Hamilton
   Advising period: Summer 2020
   Project: Analytics for Return-to-Campus Decisions to Mitigate COVID-19 Risk

6. Xinyi Li
   Advising period: Summer 2020
   Project: Analytics for Return-to-Campus Decisions to Mitigate COVID-19 Risk

5. Kaiwen Luo
   Advising period: Summer 2020
   Project: Analytics for Return-to-Campus Decisions to Mitigate COVID-19 Risk

4. Mehren Navabi-Shirazi
   Advising period: Summer 2020
   Project: Analytics for Return-to-Campus Decisions to Mitigate COVID-19 Risk

3. Yuming Sun
   Advising period: Summer 2020
   Project: Analytics for Return-to-Campus Decisions to Mitigate COVID-19 Risk

2. Shimeng Zhang
   Advising period: Summer 2020
   Project: Analytics for Return-to-Campus Decisions to Mitigate COVID-19 Risk

1. Weiyu Li
   Advising period: 2016-2017
   Note: Advised as a Graduate Student

B.4. Undergraduate Students

14. Sujan Kumar
    Georgia Tech, Spring 2025

    - Georgia Tech President's Undergraduate Research Award[†‡], Spring 2025

13. Shaktik Bhattacharyya
    Georgia Tech, Fall 2024

12. Sarah Copeland
    Georgia Tech, Spring and Summer 2024

11. Emily Bell
    Georgia Tech, Spring 2023

- Georgia Tech President's Undergraduate Research Award[†‡], Spring 2023

10. Julia Francois
    Georgia Tech SURE Program, 2022

9. Ezra Klinect
   Georgia Tech ISyE SURF Program, 2022

8. Madeleine Pollack
   Georgia Tech, 2021-2023
   Position after advising: Ph.D. Student, MIT Operations Research Center[‡]

   - National Science Foundation Graduate Research Fellow, 2025
   - Georgia Tech Davidson Family Tau Beta Pi Senior Engineering Award, 2023[‡]
   - Adobe Research Women-in-Technology Scholarship Recipient, 2022, $10,000[‡]
   - INFORMS Undergraduate Scholarship, INFORMS Annual Meeting, 2021[‡]
   - Georgia Tech President's Undergraduate Research Travel Award, Fall 2022[‡]
   - Society of Women Engineers National Conference "Rapid Fire" Competition, Finalist, 2022[†]
   - Georgia Tech Undergraduate Research Symposium, College of Engineering Oral Competition, 2nd place, 2022[†]
   - Georgia Tech President's Undergraduate Research Travel Award, Summer 2022[‡]
   - Georgia Tech Annual Outstanding Undergraduate Research Award, ISyE, 2022[†]
   - Georgia Tech President's Undergraduate Research Salary Award, Spring 2022[†‡]
   - Society of Women Engineers Collegiate Poster Competition, Finalist, 2021 [†]
   - Georgia Tech Undergraduate Research Symposium, College of Engineering Poster Competition, 3rd place, 2021[†]

7. Lauren Johnson
   Georgia Tech, 2020 (Co-advised with Dima Nazzal)
   Position after advising: Senior Associate, Data Analytics, Cancer Study Group

6. Katherine Wehrenberg
   Georgia Tech, 2020 (Co-Advised with Dima Nazzal)

   - Georgia Tech President's Undergraduate Research Award, Fall 2020 [†‡]

5. Vinayak S. Ahluwalia
   University of Michigan, 2018-2020, Advised as a Graduate Student
   Position after advising: Medical student, University of Pennsylvania

   - Computing Research Association (CRA) Outstanding Undergraduate Researcher Award, Honorable Mention, 2020 [†]
   - INFORMS Undergraduate Operations Research Prize, Honorable Mention, 2019[†]
   - INFORMS Minority Issues Forum Participant, INFORMS Annual Meeting, 2019[†]
   - Tau Beta Pi Travel Award, University of Michigan Undergraduate Research Symposium, 2019[†]
   - INFORMS Undergraduate Travel Award, INFORMS Annual Meeting, 2018

4. Charmee Kamdar
   University of Michigan, 2018-2020, Advised as a Graduate Student
   Position after advising: Intern, Facebook (starting summer 2020)

3. Harry Wang
   University of Michigan, 2019, Advised as a Graduate Student
   Position after advising: Graduate Student, Computer Science, University of Pennsylvania

2. Ryan Krueger
   University of Michigan, 2017, Advised as a Graduate Student
   Position after advising: Graduate Student Researcher, Harvard Medical School

1. Deanna Hadley
   University of Michigan, 2017, Advised as a Graduate Student
   Position after advising: Supply Chain Planning Intern, Microsoft

B.5. Service on Thesis or Dissertation Committees

B.5.a Internal

Student Name	School	Advisor(s)	Committee	Date
Mao, Lingchao	ISyE	Jing Li	Thesis	2025
Popoola, Anjolaoluwa A	ISyE	Kamran Paynabar	Thesis	2025
Sun Ju Lee	ISyE	Gian-Gabriel Garcia	Thesis	2025
			Proposal	2022
Jiajia Xie	CSE	Cassie Mitchell	Proposal	2025
Joseph McCarthy	ISyE	Mathieu Dahan, Chip White	Thesis	2024
Buse Eylul Oruc Aglar	ISyE	Pinar Keskinocak, Mohit Singh	Thesis	2023
			Proposal	2022
Jade Xiao	ISyE	Turgay Ayer	Thesis	2023
			Proposal	2022
Yi Cheng	ISyE	Alexander Shapiro	Thesis	2022
Andrew El Habr	ISyE	Turgay Ayer	Thesis	2022
Jovan Julien	ISyE	Turgay Ayer	Thesis	2022
			Proposal	2020
Zhouting Yu	ISyE	Pinar Keskinocak	Thesis	2023
			Proposal	2022
Rui Peng Liu	ISyE	Alexander Shapiro	Thesis	2022
			Proposal	2020
Anna Kirkpatrick	ACO	Cassie Mitchell, Prasad Tetali	Thesis	2021

IV.   Service

A. Professional Contributions

A.1. Society Officers, Activities, and Membership

- Leadership Roles:

  1. INFORMS Health Applications Society, Council Member, 2023-2024
  2. INFORMS Subdivisions Council, Student chapter representative, 2017-2018
  3. INFORMS Chapters/Fora Committee, Student chapter representative, 2019-2019
  4. Society of Women Engineers, University of Michigan, Outreach Co-Chair, 2015-2016
  5. INFORMS Student Chapter, University of Michigan

- – Past-President, 2018
- – President, 2017
- – Vice-President, 2016
- – Webmaster, 2015

- Award Committees:

  1. INFORMS Minority Issues Forum (MIF) Poster Competition Judge, INFORMS Annual Meeting, Anaheim, CA, October 2025
  2. INFORMS Public Sector Operations Research (PSOR) Best Paper Judge, INFORMS Annual Meeting, Anaheim, CA, October 2023
  3. INFORMS Minority Issues Forum (MIF) Poster Competition Judge, INFORMS Annual Meeting, Anaheim, CA, October 2023
  4. INFORMS Minority Issues Forum (MIF) Poster Competition Judge, INFORMS Annual Meeting, Anaheim, CA, October 2021
  5. INFORMS Minority Issues Forum (MIF) Poster Competition Judge, INFORMS Annual Meeting, Indianapolis, October 2022

- Membership:

  1. INFORMS: Institute for Operations Research and Management Science
  2. IISE: Institute for Industrial and Systems Engineers
  3. AHA: American Heart Association

A.2.   Organization and Chairmanship of Technical Sessions, Workshops and Conferences

- Member of Organizing Committee for Conferences and Workshops:

  1. Health Applications Society Co-Chair - INFORMS Annual Meeting 2025
  2. Cluster Chair, Committee's Choice Cluster - Pandemic Management, INFORMS Annual Meeting 2023

- Organizing Technical Sessions:

  1. INFORMS Healthcare Conference, 2023
  2. INFORMS Annual Meeting, 2022-2024
  3. INFORMS Annual Meeting, 2018

- Session Chair

  1. INFORMS Healthcare Conference, 2023
  2. INFORMS Annual Meeting, 2022
  3. INFORMS International Meeting/ CORS, 2022
  4. INFORMS Computing Society Conference, 2017

A.3. Technical Journal or Conference Referee Activities

- Technical Journal Referee:
    1. Healthcare Management Science
    2. IISE Transactions
    3. INFORMS Journal on Computing
        - Meritorious Reviewer, 2021
    4. Journal of Rural Health
    5. Management Science
    6. Manufacturing & Service Operations Management
    7. Operations Research
    8. Production and Operations Management
    9. Risk Analysis
    10. Service Science

A.4. Proposal Panels and Reviews

- NIH NHLBI Special Emphasis Panel
- NSF CMMI panel
- NSF CISE panel

A.5. Other Involvement

- Core Participant, National Symposium on Predicting Emergence of Virulent Entities by Novel Technologies (PREVENT), National Science Foundation Workshop, February 22-23, 2021

B. Public and Community Service

1. Conducted a two-part lecture on "Modeling Food Bank Expansion" for the Innovation Academy in Alpharetta, GA as part of their Phoenix Project. PhD student Abel Sapirstein and I led an activity demonstrating the concept of a facility location problem and then provided a tactile activity for students to work through. We then showed students code to solve this problem and visualized solutions for food bank expansion in Fulton County.

    "Phoenix Project": Innovation Academy students worked in small groups to propose a solution to a local problem in their communities. The goal of the Phoenix Project was to have students consider actionable and authentic measures they can take to tackle a local issue rather than proposing lofty goals like "change the law" or "raise awareness with PSAs" that fail to address the implications and limitations of such plans. The theme of this year's project was a school-wide focus on Food Scarcity in and around North Fulton.

2. Commencement Speaker, Elgin Academy, Elgin, IL - 2023. Spoke about my journey from wanting to be a doctor to becoming a professor of industrial engineering who works alongside doctors and public health officials to design better healthcare delivery systems.

3. Presented to the "Engineering" class at Westlake High School, Fulton County, GA about industrial engineering and healthcare applications. October 2020

4. Engineering Club at Adams STEM Academy, Ypsilanti, MI in 2015. Organized and led a weekly after-school "engineering club" for fourth-grade students which involving activities demonstrating concepts from industrial, civil, and mechanical engineering

5. Program organizer, Michigan Engineering Road Show "Listening to Light" program, 2016. Organized and ran a day-long engineering program centered around optics engineering for high-schoolers in Detroit.

6. Females Excelling More in Math, Engineering, and the Sciences (FEMMES), University of Michigan

   - Volunteer, Elementary School Science Night, 2017
   - Activity Leader, Saturday Science Capstone, 2015-2016. Led an activity to introduce middle-school girls to industrial engineering and health systems engineering through an "Emergency Department Simulation Game" partnering with the INFORMS Student Chapter.
   - Volunteer, Community Outreach at Ypsilanti Public Library, 2016

C. Institute Contributions

C.1. College Committee Service and Activities

1. Advisor, INFORMS Student Chapter, 2020–present

   - INFORMS Student Chapter Annual Awards (recognized at the Annual Meeting)
     - *summa cum laude* (2024)
     - *magna cum laude* (2021, 2022)
     - *cum laude* (2020)
     - Honorable Mention (2023)
   - Judith Liebman Awardees: Andrew ElHabr (2021)[‡], Zihan Zhang (2024)[‡]

C.2. School Committee Service

1. Faculty Advisory Committee, 2026 – 2027

2. Masters of Health Systems - Faculty Liaison

3. George Fellowship Selection Committee - 2024.

4. Co-organizer of ISyE Seminar Series- 2021– 2022.

5. Operations Research (OR) Coordinating Committee 2021–2024.

6. Graduate Student Admission Committee, 2020 – present