

# Angela Lin

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## EDUCATION

**Massachusetts Institute of Technology**, Cambridge, MA  
Ph.D. in Operations Research  
Advisor: Prof. Georgia Perakis  
GPA: 5.0/5.0

2021 – 2026 (Expected)

**Rice University**, Houston, TX  
B.A. in Computational and Applied Mathematics  
Minor in Mathematics  
GPA: 4.0/4.0

2017 – 2021

## RESEARCH INTERESTS

Clinical Decision-Making, Hospital Operations, Public Health, Non-profit Operations, Disaster and Crisis Management

## PUBLICATIONS AND WORKING PAPERS

1. **A Data-Driven, Interpretable, Risk-Aware Framework for Clinical Decision-Making Under Limited Resources**  
with Lien Le, Dessislava Pachamanova, Georgia Perakis, Omar Skali Lami. Under review at *Operations Research*.
  - Accepted for presentation at 2023 MSOM Main Conference
  - Accepted for presentation at 2023 Society of Hospital Medicine Converge Conference
2. **Dynamic Resource Allocation for Healthcare Service Design: An Application to Geographic Cohorting**  
with Dessislava Pachamanova and Georgia Perakis. Under review at *Service Science*.
  - Accepted for presentation at 2025 MSOM Main Conference
  - Accepted for presentation at 2024 Society of Hospital Medicine Converge Conference
3. **Reinforcement Learning for Clinical Decision Support for Sepsis Treatment** (Case Study on Reinforcement Learning)  
with Dessislava Pachamanova and Georgia Perakis. Under review at *INFORMS Transactions on Education*.
  - Finalist for 2025 INFORMS Case Competition
4. **Holistically Robust Markov Decision Processes for Clinical Decision-Making**  
with Gavin Findlay, Dessislava Pachamanova, Georgia Perakis. Working paper. To be submitted to *European Journal of Operations Research*.
5. **Data-Driven Decision Support for Sepsis Treatment: IV Fluid and Vasopressor Strategies**  
with Lien Le, Douglas McConnell, Dessislava Pachamanova, Georgia Perakis, Adam Schwarz. Working paper. To be submitted to *Journal of American Medical Association*

## SELECTED PRESENTATIONS AND TALKS

1. **Interpretable, Data-Driven Framework for Sepsis Treatment Decision Support**
  - 2024 and 2025 *Data, Models, and Decisions* Executive MBA course at MIT Sloan
  - 2025 MIT Sloan Visiting Committee
  - 2024 Society of Hospital Medicine Converge Conference
  - 2023 MSOM Conference
  - 2023 INFORMS Healthcare Conference
  - 2023 INFORMS Annual Meeting
  - 2022 MIT MGB AI Cures Conference
2. **Online Optimization of Patient-Physician Assignments for Geographic Cohorting**
  - 2025 INFORMS Annual Meeting
  - 2025 MSOM Conference
  - 2025 Society of Hospital Medicine Converge Conference
3. **Holistically Robust Markov Decision Processes for Clinical Treatment Decisions**
  - 2024 INFORMS Annual Meeting

## HONORS AND AWARDS

<b>INFORMS 2025 Case Competition Finalist</b> Finalist (3 out of 27) for best teaching case at Institute for Operations Research and Management Science (INFORMS) conference	October 2025
<b>MIT Health and Life Sciences Graduate Fellowship</b> 1 of 32 fellows (selected out of 222) awarded support for 2025-2026 academic year for interdisciplinary research in health sciences	August 2025
<b>National Science Foundation Graduate Research Fellowship Program Honorable Mention</b> Honorable mention for fellowship recognizing outstanding STEM graduate students in the United States	March 2023
<b>MIT-Google Innovations in Computing Fellowship</b> Selected as a fellow for full PhD support for 2022-2023 academic year by Google and MIT Schwarzman College of Computing	September 2022
<b>MIT Operations Research Center Common Experience Best Presentation</b> Best presentation for Operations Research first-year PhD qualifying project	August 2022
<b>INFORMS Undergraduate Scholarship for 2019 Annual Meeting</b> \$1,250 award from the Institute for Operations Research and Management Sciences (INFORMS) to attend annual conference	August 2019

## TEACHING EXPERIENCE

<b>Teaching Assistant</b> , MIT Sloan School of Management <i>Data, Models, and Decisions (15.730)</i> ; Student evaluation rating: 6.73/7, 6.67/7	Spring 2024, Spring 2025
• Taught recitations, redesigned course lectures, held office hours • Presented research and case study during two separate lectures	
<b>Grader</b> , Rice University Computational and Applied Math Department <i>Introduction to Operations Research and Optimization (CAAM 378)</i>	Fall 2019
• Held weekly office hours for homework questions and graded homework, projects and exams	
<b>Teaching Assistant</b> , Rice University Biology Department <i>Introductory Biology (BIOC 201)</i>	Fall 2018
• Led weekly review sessions to help students gain deeper understanding of class topics	

## INDUSTRY EXPERIENCE

<b>Advanced Analytics Intern</b> , Tampa General Hospital	June 2024 – September 2025
• Built optimization model backend as well as user interface for provider regionalization patient assignment tool through iterative collaborative process between data science team and hospitalists (end users of the tool) • Reduced physician travel time by 75% and manual assignment time by 300% through successful implementation of patient assignment tool • Leveraged queueing theory to make bed capacity recommendations for the hospital	
<b>Business Analyst Intern</b> , Capital One	June 2020 – August 2020
• Queried and analyzed data to make business recommendations regarding customer strategy for Loss Mitigation department • Increased recoveries from Total Loss customers by \$800K annually by finding the optimal number of calls to each segment of customers and redesigning outbound call strategy	
<b>Logistics Engineering Intern</b> , Daikin	May 2019 – August 2019
• Reduced annual freight costs by over \$100K by designing new “picking” schedule, implementing pooled distribution, and launching bidding process on the company’s Transportation Management System	

## SERVICE AND OUTREACH

<b>Resources for Easing Friction and Stress</b> , Operations Research Center, MIT	August 2022 – Present
• Provide confidential peer-to-peer counseling and support for fellow students in department • Organize professional, academic, health and holistic wellness-centered events for department	
<b>MIT Highschool Summer Program Volunteer Teacher</b> , MIT	July 2022 – August 2022
• Designed and taught a 6-week summer course to highschoolers on equity and inclusivity in healthcare	
<b>Community Bridges Fellow</b> , Kinder Institute for Urban Research, Rice University	August 2020 – May 2021
• Partnered with YMCA South Texas Office for Refugees to analyze data on outcomes of refugee resettlement	

<b>Academic Mentor</b> , Wiess College, Rice University	March 2020 – May 2021
• Held office hours, review sessions, and individual tutoring sessions for introductory math and computer science classes	
<b>Alternative Spring Break Participant</b> , Rice University	November 2019 – May 2020
• Studied factors contributing to K-12 educational inequity for a semester and spent a week immersed in community-engagement and hands-on learning about the K-12 education system in Houston and Austin, Texas	
<b>Eco Committee Member</b> , Wiess College, Rice University	August 2019 – May 2020
• Organized and brainstormed green initiatives for Wiess College at weekly committee meetings	
<b>Partners for Advancement of Immersion of Refugees Volunteer</b> , Rice University	August 2017 – April 2019
• Visited middle schools to lead afterschool educational activities for refugee youth once per week	

#### ADDITIONAL INFORMATION

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**Programming skills:** Python, Julia, MATLAB, SQL, R, JuMP, Gurobi, LaTeX

**Languages:** English (native), Mandarin Chinese (proficient)