

Sun Ju Lee

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EDUCATION

Georgia Institute of Technology, Atlanta, GA 8/2019 – Present
H. Milton Stewart School of Industrial and Systems Engineering
Ph.D., Operations Research (Expected 2025)
M.S., Operations Research 5/2022

Dartmouth College, Hanover, NH 9/2014 – 6/2018
B.A., Engineering Sciences
B.E., Mechanical Engineering

PUBLICATIONS

[P1] **S. J. Lee**, G.-G. P. Garcia, M. H. Platner, and S. L. Boulet (2023). Interpretable Machine Learning to Predict Adverse Perinatal Outcomes: Examining Marginal Predictive Value of Risk Factors During Pregnancy. *American Journal of Obstetrics & Gynecology MFM*, 101096.

Submitted:

[S1] X. Gong, **S. J. Lee**, and G.-G. P. Garcia (2023). Analysis of Monotone Policy Iteration for Interpretable Policies in Markov Decision Processes: Impact of State Ordering Rules. (Preprint).

BOOK CHAPTERS

[B1] **S. J. Lee**, H. S. Pandey, and G.-G. P. Garcia (2023). Designing Interpretable Machine Learning Models Using Mixed Integer Programming. In: Pardalos, P.M., Prokopyev, O.A. (eds) *Encyclopedia of Optimization*. Springer, Cham.

PRESENTATIONS

Conference Presentations:

[C2] Composite Clustered Multi-task Learning for Prediction of Adverse Pregnancy Outcomes.
– INFORMS Annual Meeting, Phoenix, AZ 10/23
– INFORMS Healthcare Conference, Toronto, ON, Canada 7/23

[C1] A Tolerance-based Approach to Lexicographic Multi-Objective Markov Decision Processes.
– INFORMS Annual Meeting, Indianapolis, IN 10/22
– SMDM Annual Meeting, Seattle, WA 10/22

Invited Seminar Presentations:

1. Interpretable Machine Learning for Adverse Pregnancy Outcomes. 9/23
School of Industrial and Systems Engineering, University of Oklahoma

HONORS AND AWARDS

Finalist, SMDM Lee B. Lusted Prize in *Quantitative Methods & Theoretical Developments* 2022

President's Fellow, Georgia Institute of Technology 2019 – 2023

Virtual Annual Meeting & Membership Scholarship, SMDM 2021

Thayer Scholar, Dartmouth College 2014 – 2018

TEACHING EXPERIENCE

Teaching Assistant

Georgia Institute of Technology, Atlanta, GA 8/2019 – 12/2021

- ISyE 3133 Engineering Optimization (undergraduate)
- ISyE 6669 Deterministic Optimization (graduate)
- ISyE 6661 Linear Optimization (graduate)
- ISyE 4134/8813 Constraint Programming (undergraduate/graduate)

Dartmouth College, Hanover, NH

6/2016 – 11/2017

- ENGS 76 Machine Engineering
- ENGS 2 Integrated Design: Engineering, Architecture, and Building Technology
- ENGS 25 Introduction to Thermodynamics

Graduate Tutor

Georgia Institute of Technology, Atlanta, GA 1/2020 – 4/2020

- ISyE 2027 Probability with Applications

EMPLOYMENT

Technical Solutions Engineer

8/2018 – 6/2019

Epic Systems Corporation, Verona, WI

- Supported various hospital organizations around the United States by providing software expertise and technical troubleshooting in the form of prompt solutions
- Provided support during and after the install of Epic software, transitioning from legacy EHR software
- Guided project management discussions of add-on modules of software
- Led quarterly discussions with operational and IT leaders at client hospital organizations to improve patient care by providing suggestions on best practices
- Built and maintained long-term relationships with IT staff at client hospital organizations

LEADERSHIP AND SERVICE ACTIVITIES

Diversity, Equity, and Inclusion Committee Student Member

7/2023 – Present

H. Milton Stewart School of Industrial and Systems Engineering, Georgia Tech

Graduate Research Mentor

5/2022 – 7/2022

Summer Undergraduate Research in Engineering/Sciences Program, Georgia Tech

Teaching Assistant

5/2020 – 6/2020

Seth Bonder Camp in Computational and Data Science for Engineering, Georgia Tech

Secretary

2017 – 2018

Tau Beta Pi Engineering Honor Society, New Hampshire Beta Chapter

Cartoonist

2017 – 2018

The Dartmouth, Student Newspaper