Sun Ju (Julie) Lee

Freeman College of Management
Bucknell University
One Dent Drive, Lewisburg, PA 17837

✉ s.lee@bucknell.edu
🌐 sunju-lee.com

Education

Georgia Institute of Technology, Atlanta, GA   2025
H. Milton Stewart School of Industrial and Systems Engineering
Ph.D., Operations Research
Dissertation: "Optimization for Interpretable Predictive & Prescriptive Modeling in Healthcare"

Georgia Institute of Technology, Atlanta, GA   2022
H. Milton Stewart School of Industrial and Systems Engineering
M.S., Operations Research

Dartmouth College, Hanover, NH   2018
B.E., Mechanical Engineering
B.A., Engineering Sciences

Academic Appointments

Bucknell University, Lewisburg, PA   8/25–Present
Freeman College of Management
Assistant Professor, Analytics & Operations Management

Publications

Published/Accepted Papers

S. J. Lee, X. Gong, and G.-G. P. Garcia (2024). Modified Monotone Policy Iteration for Interpretable Policies in Markov Decision Processes and the Impact of State Ordering Rules. *Annals of Operations Research.*

S. J. Lee, G.-G. P. Garcia, K.H. Stanhope, 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.

Book Chapters

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.

Submitted Papers

Y. Yang, T. Liu, **S. J. Lee**, C.-Y. Liao, H. Shao, F. Pasquel, M. B. Weber, E. Keyvanshokooh, G.-G. P. Garcia (2025). Survival Modeling for CVD Risk Estimation Among a Diverse Cohort with Type-2 Diabetes. (*Submitted*)

S. J. Lee and G.-G. P. Garcia (2025). A Data-driven Optimization Approach to Designing Parsimonious, Interpretable, and Equitable Treatment Guidelines. (*Submitted*)

Invited Conference and Workshop Presentations (<u>Presenter</u>)

Y. Yang, T. Liu, **S. J. Lee**, C.-Y. Liao, H. Shao, F. Pasquel, M. B. Weber, E. Keyvanshokooh, G.-G. P. Garcia. Development and Fairness Evaluation of CVD Risk Prediction Models for Patients with Type 2 Diabetes. *IISE Annual Conference,* Atlanta, GA, June 2025.

S. J. Lee, G.-G. P. Garcia, K.H. Stanhope, M. H. Platner, and S. L. Boulet. Composite Clustered Multi-task Learning for Prediction of Adverse Pregnancy Outcomes. *POMS Conference,* Atlanta, GA, May 2025.

Y. Yang, T. Liu, **S. J. Lee**, C.-Y. Liao, H. Shao, F. Pasquel, M. B. Weber, E. Keyvanshokooh, G.-G. P. Garcia. Development and Fairness Evaluation of CVD Risk Prediction Models for Patients with Type 2 Diabetes. *Society for Medical Decision Making Annual Meeting,* Boston, MA, October 2024.

S. J. Lee and G.-G. P. Garcia. A Data-driven Optimization Approach to Designing Parsimonious Treatment Guidelines. *INFORMS Annual Meeting (Bonder Scholars Session),* Seattle, WA, October 2024.

S. J. Lee, G.-G. P. Garcia, K.H. Stanhope, M. H. Platner, and S. L. Boulet. Composite Clustered Multi-task Learning for Prediction of Adverse Pregnancy Outcomes. *INFORMS Annual Meeting,* Seattle, WA, October 2024.

Y. Yang, T. Liu, **S. J. Lee**, C.-Y. Liao, H. Shao, F. Pasquel, M. B. Weber, E. Keyvanshokooh, G.-G. P. Garcia. Survival Modeling for CVD Risk Estimation Among a Diverse Cohort with Type-2 Diabetes. *AI for Health Equity Symposium AIM-AHEAD Annual Meeting,* Atlanta, GA, August 2024.

S. J. Lee, G.-G. P. Garcia, K.H. Stanhope, M. H. Platner, and S. L. Boulet. Composite Clustered Multi-task Learning for Prediction of Adverse Pregnancy Outcomes. *INFORMS Annual Meeting,* Phoenix, AZ, October 2023.

S. J. Lee, G.-G. P. Garcia, K.H. Stanhope, M. H. Platner, and S. L. Boulet. Composite Clustered Multi-task Learning for Prediction of Adverse Pregnancy Outcomes. *INFORMS Healthcare Conference,* Toronto, ON, July 2023.

S. J. Lee and G.-G. P. Garcia. A Tolerance-based Approach to Lexicographic Multi-Objective Markov Decision Processes. *Society for Medical Decision Making Annual Meeting,* Seattle, WA, October 2022.

S. J. Lee and G.-G. P. Garcia. A Tolerance-based Approach to Lexicographic Multi-Objective Markov Decision Processes. *INFORMS Annual Meeting,* Indianapolis, IN, October 2022.

Invited Seminar Presentations

A Data-driven Approach to Designing Optimal Treatment Guidelines. *ISE Winter Symposium, Department of Industrial and Systems Engineering, Korean Advanced Institute of Science and Technology (KAIST),* December 2024.

Interpretable Machine Learning for Adverse Pregnancy Outcomes. *Graduate Seminar Series, School of Industrial and Systems Engineering, University of Oklahoma,* September 2023.

Other Presentations

S. J. Lee and G.-G. P. Garcia. A Data-driven Optimization Approach to Designing Parsimonious Treatment Guidelines. *INFORMS Annual Meeting Minority Issues Forum Poster Competition,* Seattle, WA, October 2024.

S. J. Lee and G.-G. P. Garcia. A Data-driven Optimization Approach to Designing Parsimonious Treatment Guidelines. *WiscProf: Future Faculty in Engineering Workshop,* Madison, WI, May 2024.

S. J. Lee, G.-G. P. Garcia, K.H. Stanhope, and S. L. Boulet. Composite Clustered Multi-task Learning for Prediction of Adverse Pregnancy Outcomes. *The Next Generation 2023 Forum,* Atlanta, GA, October 2023.

S. J. Lee, G.-G. P. Garcia, K.H. Stanhope, M. H. Platner, and S. L. Boulet. Composite Clustered Multi-task Learning for Prediction of Adverse Pregnancy Outcomes. *INFORMS Annual Meeting Minority Issues Forum Poster Competition,* Phoenix, AZ, October 2023.

Teaching

At Bucknell University

Semester Year	Course Number	Course Title	Course Size
Fall 2025	ANOP 102	Spreadsheet Modeling & Data Analysis	22
Fall 2025	ANOP 370	Prescriptive Analytics: Decision Modeling & Optimization	22

Awards & Honors

George Family Fellow, H. Milton Stewart School of Industrial and Systems Engineering 2024–2025
Georgia Institute of Technology

Finalist, Lee B. Lusted Prize in Quantitative Methods & Theoretical Developments 2022
Society of Medical Decision-Making

President's Fellow 2019–2023
Georgia Institute of Technology

Thayer Scholar, Thayer School of Engineering 2014–2018
Dartmouth College

Professional Experience

Epic Systems Corporation, Verona, WI 2018–2019
Technical Solutions Engineer

Professional Service

Journal Reviewer

- BJOG: An International Journal of Obstetrics & Gynaecology

Session Chair

- INFORMS Annual Meeting, 2025 (Upcoming)
- IISE Annual Conference, 2025
- INFORMS Healthcare Conference, 2023