

JISUN LEE

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EDUCATION

- Ph.D.** **University of California, Berkeley, USA**
- Industrial Engineering & Operations Research, August 2020 - present (expected May 2025)
- Advisor: Alper Atamtürk [\[link\]](#)
- M.S.** **Seoul National University (SNU), Republic of Korea**
- Industrial Engineering, August 2019
- Advisor: Kyungsik Lee [\[link\]](#)
- Thesis: An Approximation Scheme for the Probability Maximizing Combinatorial Optimization Problem [\[link\]](#)
- B.S.** **Seoul National University (SNU), Republic of Korea**
- Industrial Engineering, August 2017
- Thesis: A Study on the Corporate Credit Rating Prediction Model using Convolution Neural Network with Time Series Data

PAPERS

- Convexification of multi-period mixed-integer quadratic optimization**
Jisun Lee, Andrés Gómez, and Alper Atamtürk.
(Working paper, presented at INFORMS 2024, MIP Workshop 2024)
- Cut generation in multi-period mixed-integer quadratic optimization through coupling periods**
Jisun Lee and Alper Atamtürk. (Working paper)
- Efficient sampling from ϵ -optimality solution set of mixed-integer programming problems** [\[pdf\]](#)
Jisun Lee, Alper Atamtürk, and Ignacio Aravena Solís. (Working paper)
- Strong formulations for hybrid model predictive control** [\[pdf\]](#)
Jisun Lee, Hyunki Im, and Alper Atamtürk.
(Working paper, presented at MIP Workshop 2023, INFORMS 2023, SIAM Optimization Conference 2023)
- A fully polynomial time approximation scheme for the probability maximizing shortest path problem** [\[pdf\]](#)
Jisun Lee, Seulgi Joung, and Kyungsik Lee. European Journal of Operational Research, 2022.

PRESENTATION

- 2024 INFORMS Annual Meeting**, Seattle, USA. [\[slides\]](#)
- Convexification of multi-period mixed-integer quadratic optimization.
- 2024 Mixed Integer Programming Workshop**, Kentucky, USA. [\[poster\]](#)
- Strong formulation of hybrid control problem with tridiagonal inverse matrix.
- 2019 European Conference on Operational Research**, Dublin, Ireland. [\[slides\]](#)
- An approximation scheme of the probability maximizing combinatorial optimization problem.
- 2019 Fall Conference of Korean Institute of Industrial Engineers**, Seoul, Republic of Korea.
- A fully polynomial time approximation scheme for the probability maximizing shortest path problem.
- 2019 Spring Conference of Korean Institute of Industrial Engineers**, Seoul, Republic of Korea.
- An approximation scheme of the probability maximizing combinatorial optimization problem.

TEACHING ASSISTANT

IEOR 262A Mathematical Programming I	UC Berkeley, Fall 2024
IEOR 165 Engineering Statistics, Quality Control, and Forecasting	UC Berkeley, Spring 2024
IEOR 142 Introduction to Machine Learning and Data Analytics	UC Berkeley, Spring 2023

RESEARCH INTEREST

- Mixed-Integer Programming, Combinatorial Optimization, Convex Optimization
- Applications: Statistical Learning, Control Optimization
- Optimization Under Uncertainty: Stochastic Optimization, Robust Optimization

SKILLS

Programming Language: Python, Java, C++

Modeling & Analysis Tool: Gurobi, Mosek, Xpress, CPLEX, Drake, MPI, MATLAB, R, Arena

HONORS & AWARDS

Bonder Scholarship, Bonder Foundation, 2024.

Exellence Prize (3rd Prize) in KIIE Master's Thesis Competition, 2019.

Brain Korea 21 Plus Scholarship, 2018.

National Scholarship for Science & Engineering, Korea Student Aid Foundation, 2016.

SNU Scholarship for Academic Achievement, 2015.

Uisan Engineering Scholarship, 2014.

4th Prize in SNU Big Data Institute 2nd Datathon, 2014.