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

Convex hull of uncapacitated multi-period mixed-integer quadratic optimization

Jisun Lee, Andrés Gómez, and Alper Atamtürk. (Working paper, presented at MIP Workshop 2024)

Cut generation for multi-period mixed-integer quadratic optimization by linking consecutive periods

Jisun Lee and Alper Atamtürk. (Working paper)

Efficient sampling from ϵ-optimality solution set [pdf]

Jisun Lee, Alper Atamtürk, and Ignacio Aravena Solís. (Working paper)

Strong formulations for hybrid model predictive control [pdf]

Jisun Lee, Hyungki Im, and Alper Atamtürk.

(Preprint, 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 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

- 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, Seth 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.