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 mixed-integer quadratic optimization problems with separable cost matrices

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

Efficient sampling from ϵ-optimality solution set

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

Cut generation for hybrid model predictive control by linking consecutive periods

Jisun Lee and Alper Atamtürk. (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

UC Berkeley IEOR Departmental Fellowship, 2020.
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.