# Hailong Sun

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https://hl-sun.github.io

RESEARCH INTERESTS Stochastic and Robust Optimization; Data-driven Decision Making; Online Learning and Online Convex Optimization; Pricing Analytics and Revenue Management; Discrete Choice Modeling; Analytics for Social Good

EDUCATION

National University of Singapore, Singapore

Aug. 2017 – Jun. 2022 (expected)

PhD Candidate in Operations Research

- Thesis: "Bundle Design and Pricing: Theory and Applications"
- Advisors: Chung Piaw Teo and Xiaobo Li

South China University of Technology, Guangzhou, China M. Frag in Management Science and Engineering

Sep. 2014 – Jul. 2017

M.Eng. in Management Science and Engineering

Ocean University of China, Qingdao, China B.Eng. in Environmental Engineering Sep. 2007 – Jun. 2011

JOURNAL PUBLICATIONS

"Convex Optimization for Bundle Size Pricing Problem", with Xiaobo Li and Chung Piaw Teo. Management Science, 2022 [link]

• Preliminary version: Proceedings of ACM Conference on Economics and Computation (EC), 2020

Working Papers "On the Design and Pricing of A Single Bundle", with Xiaobo Li and Chung Piaw Teo. Under revision, 2021 [link]

"Product and Ancillary Pricing Optimization: Market Share Analytics via Perturbed Utility Model", with Xiaobo Li and Chung Piaw Teo. Under review, 2021 [link]

"Robust Capacity Planning and Battery Charging Policy for Electric Vehicle Battery Swap Station", with Bo Feng and Zuo-Jun Max Shen. Under revision, 2020 [link]

"Airline Fare Family Pricing under Cross Moment Model", with Changchun Liu, Maoqi Liu and Chung Piaw Teo, 2021

Work-In-Progress "Data-Driven SKU Rationalization for Food Bank Singapore", with Victor Fernandez and Chung Piaw Teo, 2021

WORK Experience Singapore Airlines, Singapore

Summer 2018

Revenue Management Intern

• Developed models and algorithms for fare family pricing and network revenue management.

Microsoft (China), Guangzhou, China Online Advertising Intern Jan. 2017 - May. 2017

• Worked on a consulting project to build data management platform for an advertisement company.

## HAIWAN Engineering, Qingdao, China

Aug. 2011 – Jul. 2014

Design Engineer

 Worked on design projects to make layout and logistics planning for chemical and power plant construction.

Teaching
EXPERIENCE

#### Tutor

• IE4211 Modeling and Analytics (undergraduate)

Spring 2020

#### Teaching Assistant

• DBA4811/DAO4213 Analytical Tools for Consulting (undergraduate)	Spring 2022
• BDC6248/IE6881 Pricing and Revenue Management (PhD)	Fall 2019
• BDC5101 Deterministic Operations Research Models (MSBA)	Spring 2019
• DAO1704 Decision Analytics using Spreadsheets (undergraduate)	Fall 2018

### Conference Presentation

#### Convex Optimization for Bundle Size Pricing Problem

• The 21st ACM Conference on Economics and Computation (EC), online	Jul. 2020
• INFORMS Annual Meeting, Seattle	Oct. 2019
• Mostly OM Workshop, Shenzhen	Jun. 2019
• CSAMSE, online	Jul. 2021

Bundle Recommendation and Pricing: A Simple Mechanism and Its Optimization

MSOM Conference, online	Jun. $2021$
• INFORMS Revenue Management and Pricing Section Conference, online	Jun. 2021
• CSAMSE, online	Jul. 2021

Honors and Awards NUS Research Scholarship SCUT Academic Scholarship 2017 - 20212014 - 2017

COMPUTER SKILLS Python, R, MATLAB, Gurobi, Mosek, LATEX

#### References

## Chung Piaw Teo (Advisor)

Professor

NUS Business School

National University of Singapore

Email: bizteocp@nus.edu.sg

Xiaobo Li (Advisor)

Assistant Professor Department of ISEM

National University of Singapore

Email: iselix@nus.edu.sg

## Zizhuo Wang

Associate Professor School of Data Science

The Chinese University of Hong Kong, Shenzhen

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