

# Hailong Sun

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| CONTACT INFORMATION  | Institute of Operations Research and Analytics<br>National University of Singapore<br>3 Research Link, 117602, Singapore  | ☎ +65 8431 5336<br>✉ <a href="mailto:hailong.sun@u.nus.edu">hailong.sun@u.nus.edu</a><br>🌐 <a href="https://hl-sun.github.io">https://hl-sun.github.io</a> |
| 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            | <b>National University of Singapore</b> , Singapore<br>PhD Candidate in Operations Research<br><ul style="list-style-type: none"><li>• Thesis: “Bundle Design and Pricing: Theory and Applications”</li><li>• Advisors: Chung Piaw Teo and Xiaobo Li</li></ul>  | Aug. 2017 – Jun. 2022 (expected)   |
|                      | <b>South China University of Technology</b> , Guangzhou, China<br>M.Eng. in Management Science and Engineering  | Sep. 2014 – Jul. 2017  |
|                      | <b>Ocean University of China</b> , Qingdao, China<br>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. <i>Management Science</i> , 2022 <a href="#">[link]</a> <ul style="list-style-type: none"><li>• Preliminary version: <i>Proceedings of ACM Conference on Economics and Computation (EC)</i>, 2020</li></ul>   |  |
| WORKING PAPERS       | “On the Design and Pricing of A Single Bundle”, with Xiaobo Li and Chung Piaw Teo. Under revision, 2021 <a href="#">[link]</a><br><br>“Product and Ancillary Pricing Optimization: Market Share Analytics via Perturbed Utility Model”, with Changchun Liu, Maoqi Liu and Chung Piaw Teo. Under review, 2021 <a href="#">[link]</a><br><br>“Robust Capacity Planning and Battery Charging Policy for Electric Vehicle Battery Swap Station”, with Bo Feng and Zuo-Jun Max Shen. Under revision, 2020 <a href="#">[link]</a><br><br>“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      | <b>Singapore Airlines</b> , Singapore<br>Revenue Management Intern<br><ul style="list-style-type: none"><li>• Developed models and algorithms for fare family pricing and network revenue management.</li></ul>   | Summer 2018  |
|                      | <b>Microsoft (China)</b> , Guangzhou, China<br>Online Advertising Intern<br><ul style="list-style-type: none"><li>• Worked on a consulting project to build data management platform for an advertisement company.</li></ul>  | Jan. 2017 – May. 2017  |

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|                            | <b>HAIWAN Engineering</b> , Qingdao, China<br>Design Engineer  | Aug. 2011 – Jul. 2014   |
|                            | <ul style="list-style-type: none"> <li>• Worked on design projects to make layout and logistics planning for chemical and power plant construction.</li> </ul>   |   |
| TEACHING<br>EXPERIENCE     | <p>Tutor</p> <ul style="list-style-type: none"> <li>• IE4211 Modeling and Analytics (undergraduate) Spring 2020</li> </ul> <p>Teaching Assistant</p> <ul style="list-style-type: none"> <li>• DBA4811/DAO4213 Analytical Tools for Consulting (undergraduate) Spring 2022</li> <li>• BDC6248/IE6881 Pricing and Revenue Management (PhD) Fall 2019</li> <li>• BDC5101 Deterministic Operations Research Models (MSBA) Spring 2019</li> <li>• DAO1704 Decision Analytics using Spreadsheets (undergraduate) Fall 2018</li> </ul>  |   |
| CONFERENCE<br>PRESENTATION | <p>Convex Optimization for Bundle Size Pricing Problem</p> <ul style="list-style-type: none"> <li>• The 21st ACM Conference on Economics and Computation (EC), online Jul. 2020</li> <li>• INFORMS Annual Meeting, Seattle Oct. 2019</li> <li>• Mostly OM Workshop, Shenzhen Jun. 2019</li> <li>• CSAMSE, online Jul. 2021</li> </ul> <p>Bundle Recommendation and Pricing: A Simple Mechanism and Its Optimization</p> <ul style="list-style-type: none"> <li>• MSOM Conference, online Jun. 2021</li> <li>• INFORMS Revenue Management and Pricing Section Conference, online Jun. 2021</li> <li>• CSAMSE, online Jul. 2021</li> </ul> |   |
| HONORS AND<br>AWARDS       | <p>NUS Research Scholarship 2017 – 2021</p> <p>SCUT Academic Scholarship 2014 – 2017</p>   |   |
| COMPUTER SKILLS            | Python, R, MATLAB, Gurobi, Mosek, L <sup>A</sup> T <sub>E</sub> X  |   |
| REFERENCES                 | <p><b>Chung Piaw Teo (Advisor)</b><br/>Professor<br/>NUS Business School<br/>National University of Singapore<br/>Email: <a href="mailto:bizteocp@nus.edu.sg">bizteocp@nus.edu.sg</a></p> <p><b>Zizhuo Wang</b><br/>Associate Professor<br/>School of Data Science<br/>The Chinese University of Hong Kong, Shenzhen<br/>Email: <a href="mailto:wangzizhuo@cuhk.edu.cn">wangzizhuo@cuhk.edu.cn</a></p>   | <p><b>Xiaobo Li (Advisor)</b><br/>Assistant Professor<br/>Department of ISEM<br/>National University of Singapore<br/>Email: <a href="mailto:iselix@nus.edu.sg">iselix@nus.edu.sg</a></p> |