

# Sarah Yini Gao

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CONTACT INFORMATION	Lee Kong Chian School of Business #4073 Singapore Management University, 50 Stamford Road, Singapore 178899	Tel: (65) 68289658 Hp: (65) 98238394 E-mail: yngao@smu.edu.sg Website: www.sarahyinigao.com
POSITION	<b>Singapore Management University</b> , Singapore, Singapore <b>Lee Kong Chian School of Business</b> , Assistant Professor of Operations Management, July 2017 - Present	
RESEARCH INTERESTS	Healthcare and humanitarian Operations; Supply chain risk management; Homeland security games; Process flexibility; Social responsibility; Distributionally robust optimization; Co-positive/completely positive program; Game theory	
EDUCATION	<b>National University of Singapore</b> , Singapore, Singapore Ph.D., Department of Analytics and Operations, January 2013 - June 2017 <b>Thesis Title:</b> Completely Positive and Co-positive Programming: Applications in Disruption Risk Management, Post-disaster Humanitarian Logistics and Homeland Security Games <b>Thesis Advisor:</b> Professor TEO Chung-Piaw <b>Committee Members:</b> Professor Mabel CHOU, Professor TOH Kim Chuan B.A, Business Administration, August 2008 - May 2012 B.A, Chemical Engineering, August 2008 - May 2012	
PUBLICATIONS	<b>Healthcare and Humanitarian Operations</b> <ul style="list-style-type: none"><li>• Zhu, T., Yeo, N., Gao, S.Y., and Loke, G.G., 2023. Inventory-Responsive Donor Management Policy: A Tandem Queueing Network Model. <i>Accepted in <b>Manufacturing &amp; Service Operations Management</b></i>.</li><li>• Chen, G., Gao, S.Y., Zheng, Z., Yuan, Y., and Chen, X., 2022. On the Test Accuracy and Effective Control of the COVID-19 Pandemic: A Case Study in Singapore. <i>INFORMS Journal on Applied Analytics</i>, 52(6), pp.524-538.</li></ul> <b>Supply Chain and Operations Management</b> <ul style="list-style-type: none"><li>• Gao, S.Y., Simchi-levi, D., Teo, C.P., and Yan, Z., 2019. Disruption Risk Mitigation in Supply Chains - The Risk Exposure Index Revisited. <i>Operations Research</i>, 67(3), pp.831-852.</li><li>• Yan, Z., Gao, S.Y., and Teo, C.P., 2018. On the Design of Sparse but Efficient Structures in Operations. <i>Management Science</i>, 64(7), pp.3421-3445.</li></ul> <b>Innovative Business Models</b> <ul style="list-style-type: none"><li>• Ye, Z., Gao, S.Y., and Lim, W.S., 2022. Optimal Channel Strategy of Luxury Brands in the Presence of Online Marketplace and Counterfeits. <i>European Journal of Operational Research</i>, 308(2), pp.709-721.</li><li>• Gao, S.Y., Lim, W.S. and Tang, C., 2016. Entry of Copycats of Luxury Brands. <i>Marketing Science</i>, 36(2), pp.272-289.</li></ul>	

- Gao, S.Y., Lim, W.S. and Tang, C., 2016. The Impact of the Potential Entry of Copycats: Entry Conditions, Consumer Welfare, and Social Welfare. *Decision Sciences*.

#### Optimization and Game Theory

- Gao, S.Y., Sun, J., and Wu, S.Y., 2016 A Semi-infinite Programming Approach to Two-stage Stochastic Linear Programs with High-order Moment Constraints, *Optimization Letters*, pp.1-11.
- Gao, S.Y., Kong, L. and Sun, J., 2014. Robust Two-stage Stochastic Linear Programs with Moment Constraints. *Optimization*, 63(6), pp.829-837.

#### WORKING PAPERS **Healthcare and Humanitarian Operations**

- Gao, S.Y., Teo, C.P., and Zheng, H., Homeland Security Games: The Value of Flexible Redeployment, *Major Revision in Operations Research*.
- Gao, S.Y., Lyu, G, and Bi, S., Post-Disaster Humanitarian Logistics Planning: A Time-to-Survive Framework. *Under Review* .
- Bandi, C., Gao, S.Y., Moorthy, R., and Teo, C.P., COVID-19 Vaccine Appointment Scheduling: The Second Dose Challenge. *Under Review* .
- Gao, S.Y., He, Y., Zhang, R., and Zheng, Z., Optimizing Initial Screening for Colorectal Cancer Detection with Adherence Behavior. *Under Review* .
- On the Adherence of Colorectal Cancer Screening Policies: A Survey Study in Singapore. under preparation. (With Zhichao Zheng, Yan He, and Nicholas Yeo)

#### Optimization and Game Theory

- Data-Driven Robust Incomplete Information Games and Bounded Rationality. under preparation. (With Chung-Piaw Teo)

#### Innovative Business Models

- Lu, L., Fang, X., Gao, S.Y., and Kazaz, B., Collaborating with the Enemy? Sourcing Decisions in the Presence of Potential Counterfeiters. *Under Review* .
- Palsule-Desai, D.O, Gao, S.Y., and Teo, C.P., Intermediary Agri-Service Providers with Co-Production: The Impact of Farm Size on Performance. *Under Review* .
- Manufacturing Flexibility Investment in the Presence of Subscription Programs. under preparation. (With Onur Boyabatli and Liling Lu)

#### RESEARCH GRANTS

1. Blood Donor Management: An Exploration on an Inventory-Responsive Policy, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): GAO, Yini, 2020, S\$33,229
2. On the Design of Customized Colorectal Cancer Screening Policies to Improve Screening Guideline Compliance, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): GAO, Yini , Co-PI (Project Level): ZHENG Zhichao Daniel, 2018, S\$74,945

#### NEWS ARTICLES

1. Lim, W.S., Tang, C. and Gao, S.Y., 2017. Mainland-made copycats triumph *South China Morning Post*
2. Gao, S.Y., Lim, W.S. and Tang, C., 2016. Fakes can be better than the real thing? Don't buy it! *The Business Times*.

1. Zhu, T., Yeo, N., Gao, S. Y., and Loke, G.G., Inventory-Responsive Donor Management Policy: A Tandem Queueing Network Model. POMS HK 2023, Hong Kong, China, Jan, 2023.
2. Gao, S.Y., Zheng, Z., He, Y., and Zhang, R., Optimizing Initial Screening for Colorectal Cancer Detection with Adherence Behavior. Chinese University of Hong Kong , Hong Kong, China, Jan, 2023.
3. Gao, S.Y., Zheng, Z., He, Y., and Zhang, R., Optimizing Initial Screening for Colorectal Cancer Detection with Adherence Behavior. Shanghai Jiaotong University , Shanghai, China, Oct, 2022.
4. Bandi, C., Gao, S.Y., Moorthy, R., and Teo, C.P., COVID-19 Vaccine Appointment Scheduling: The Second Dose Challenge. The Technical University of Munich, Munich, Germany, July, 2022.
5. Zhu, T., Yeo, N., Gao, S. Y., and Loke, G.G., Inventory-Responsive Donor Management Policy: A Tandem Queueing Network Model. MSOM 2022, Munich, Germany, June, 2022.
6. Gao, S.Y., Zheng, Z., He, Y., and Zhang, R., Optimizing Initial Screening for Colorectal Cancer Detection with Adherence Behavior. Nanyang Technological University, Mar, 2022.
7. Gao, S.Y., Zheng, Z., He, Y., and Zhang, R., Optimizing Initial Screening for Colorectal Cancer Detection with Adherence Behavior. City University of Hong Kong, Hong Kong, China, Nov, 2020.
8. Gao, S.Y., Zheng, Z., He, Y., and Zhang, R., Optimizing Initial Screening for Colorectal Cancer Detection with Adherence Behavior. National University of Singapore, Singapore, Oct, 2020.
9. Gao, S.Y., Zheng, Z., He, Y., and Yeo, N., On the Adherence to Colorectal Cancer Screening Policies? A Survey Study in Singapore. POMS HK, Hong Kong, China, Jan, 2020.
10. Gao, S.Y., Lim, W.S. and Ye, Z., Luxury Brands and Online Marketplace: Friend or Foe? INFORMS Annual Meeting 2019, Seattle, United States, October, 2019.
11. Gao, S.Y., Teo, C.P., and Zheng, H., Disaster Relief Resource Pre-position and Redeployment Facing an Adversarial Nature. ICCOPT, Berlin, Germany, August, 2019.
12. Gao, S.Y., Zheng, Z., He, Y., and Yeo, N., On the Adherence to Colorectal Cancer Screening Policies? A Survey Study in Singapore. Health Promotion Board, Singapore, June, 2019.
13. Gao, S.Y., Lyu, G., and Bi, S., Post-Disaster Humanitarian Logistics Planning: A Time-to-Survive Framework. ICOR, Changsha, China, May, 2019.
14. Gao, S.Y., Lyu, G., and Bi, S., Post-Disaster Humanitarian Logistics Planning: A Time-to-Survive Framework. POMS, May, 2019.
15. Gao, S.Y., Teo, C.P., and Zheng, H., Disaster Relief Resource Pre-position and Redeployment Facing an Adversarial Nature. Hong Kong University of Science and Technology, Hong Kong, China, March, 2019.
16. Gao, S.Y., Teo, C.P., and Zheng, H., Disaster Relief Resource Pre-position and Redeployment Facing an Adversarial Nature. POMS HK, Hong Kong, China, January, 2019.
17. Gao, S.Y., Teo, C.P., Data-Driven Robust Incomplete Information Games and Bounded Rationality. ISMP, Bordeaux, France, July, 2018.
18. Gao, S.Y., Lyu, G., and Bi, S., Post-Disaster Humanitarian Logistics Planning: A Time-to-Survive Framework. INFORMS International, Taiwan, June, 2018.

19. Gao, S.Y., Simchi-levi, D., Teo, C.P., Yan, Z. Disruption Risk Mitigation in Supply Chains - The Risk Exposure Index Revisited. POMS, May, 2018.
20. Gao, S.Y., Simchi-levi, D., Teo, C.P., Yan, Z. Disruption Risk Mitigation in Supply Chains - The Risk Exposure Index Revisited. Workshop on Optimization and Operations Management, Shanghai, China, November 2017.
21. Gao, S.Y., Simchi-levi, D., Teo, C.P., Yan, Z. Disruption Risk Mitigation in Supply Chains - The Risk Exposure Index Revisited. INFORMS Annual Meeting 2016, Nashville, United States, November 2016.
22. Gao, S.Y., Teo, C.P., and Zheng, H., Colonel Blotto with Redeployment: A Conic Approach. 5th World Congress of the Game Theory Society, Maastricht, The Netherlands, July 2016.
23. Yan, Z., Gao, S.Y., and Teo, C.P., On the Design of Sparse but Efficient Structures in Operations. INFORMS Annual Meeting 2015, Philadelphia, Pennsylvania, United States, November 2015.
24. Gao, S.Y., Lim, W.S. and Tang, C., 2016. The Impact of the Potential Entry of Copycats: Entry Conditions, Consumer Welfare, and Social Welfare. POMS International Conference 2014, Singapore, Singapore, July, 2014.

HONORS AND  
AWARDS

Lee Kong Chian Fellowship, Singapore Management University, 2020-2022.  
 Dean's List of Teaching Award, Singapore Management University, 2021-2022.  
 Dean's List of Teaching Award, Singapore Management University, 2020-2021.  
 President's Graduate Fellowship, National University of Singapore, 2013-2017.  
 NUS Research Scholarship, National University of Singapore, 2013- 2017  
 NUS Exchange Student Awards, National University of Singapore, 2011  
 Student Exchange Program Scholarship, ETH, Zurich, 2011  
 Dean's List, Department of Chemical and Bimolecular Department, National University of Singapore  
 Dean's List, Business School, National University of Singapore  
 Book prize for extraordinary academic performance, NUS Bridging Course Program, National University of Singapore, 2008  
 Ministry of Education Scholarship for PRC Senior Middle Two Students, 2006 - 2012  
 Best Innovative Project Award in China Youth Science and Technology Competition, China, 2005

TEACHING  
EXPERIENCE

1. (Undergraduate) *Service and Operations Analytics*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 1, AY 2022/23.
2. (Ph.D.) *Linear Optimization*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 1, AY 2022/23.
3. (Ph.D.) *Topics in Interdisciplinary Research in OM*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 2, AY 2021/22.
4. (Undergraduate) *Service and Operations Analytics*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 1, AY 2021/22.
5. (Undergraduate) *Supply Chain Management*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 1, AY 2021/22.

6. (Ph.D.) *Pro-seminar*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 2, AY 2020/21.
7. (Ph.D.) *Linear Optimization*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 1, AY 2020/21.
8. (Undergraduate) *Service and Operations Analytics*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 1, AY 2020/21.
9. (Undergraduate) *Supply Chain Management*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 1, AY 2020/21.
10. (Undergraduate) *Supply Chain Management*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 1, AY 2019/20.
11. (Undergraduate) *Supply Chain Management*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 1, AY 2018/19.
12. (Ph.D.) *Topics in Interdisciplinary Research in OM*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 2, AY 2017/18.
13. (Undergraduate) *Supply Chain Management*. Instructor, Lee Kong Chian School of Business, Singapore Management University, Term 1, AY 2017/18.
14. (Undergraduate) *Business Analytic I*. Instructor, School of Business, National University of Singapore, Term 2, AY 2016/17.
15. (Undergraduate) *Business Analytic II*. Tutor, School of Business, National University of Singapore, Term 1, AY 2015/16.
16. (Undergraduate) *Physical Distribution Management*. Teaching Assistant, School of Business, National University of Singapore, Term 1, AY 2014/15.
17. (EMBA) *SF Express - NUS International Business Leader Program*. Teaching Assistant, School of Business, National University of Singapore, Summer, 2014.
18. (Undergraduate) *Supply Chain Management*. Tutor, School of Business, National University of Singapore, Term 2, AY 2013/14.

ACADEMIC  
EXPERIENCE

**The Technical University of Munich** , Munich, Germany *Visiting Scholar* **July 2022**  
**Hong Kong Hong Kong University of Science and Technology** , Hong Kong, China  
*Visiting Scholar* **March 2019**  
**University of Pennsylvania**, Philadelphia, Pennsylvania *Visiting Scholar* **Fall 2016**

PROFESSIONAL  
SERVICES

**Ad Hoc Reviewers**

1. Management Science
2. MSOM
3. POM