

GAR GOEI LOKE

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gg-ed.github.io

Education History

PhD (Mathematics), National University of Singapore, 2019.

Advised by Prof Kim Chuan Toh and Prof Melvyn Sim.

Masters of Mathematics (Distinction) & BSc (Hons) 2nd Class Upper
Fitzwilliam College, University of Cambridge, 2012.

Papers in the Public Domain

- 1 Loke, G. G., Q. Tang, Y. Xiao. 2020. Decision-driven Regularization: Harmonizing the Predictive and Prescriptive.
 - Online: <http://ssrn.com/abstract=3623006>
 - Soon to be presented at INFORM Annual Meeting 2020,
 - 2 Zhou, M., C. Bandi, G. G. Loke, Z. Q. G. Liao, W. Wang. 2019. Intraday Scheduling with Patient Re-entries and Variability in Behaviours. Major Revision in MSOM.
 - Online: <http://ssrn.com/abstract=3451911>
 - Presented at: INFORMS Annual Meeting 2019, Seattle; Mostly OM 2019, Shenzhen
 - 3 Bandi, C., G. G. Loke. 2018. Exploiting Hidden Convexity for Optimal Flow Control in Queueing Networks. Reject & Resubmit in Operations Research.
 - Online: <https://ssrn.com/abstract=3190874>
 - Presented at: INFORMS Annual Meeting 2019, Seattle; APS Conference 2019, Brisbane; MSOM Conference 2019, Singapore; Mostly OM 2019, Shenzhen
 - 4 Jaillet, P., G. G. Loke, M. Sim. 2018. Strategic Manpower Planning under Uncertainty. Major Revision in Operations Research.
 - Online: <https://ssrn.com/abstract=3168168>
 - Presented at: MSOM Conference 2018, Dallas, INFORMS Annual Meeting 2017, Houston
 - 5 Xie, J., G. G. Loke, M. Sim, S. W. Lam. 2018. The Analytics of Bed Shortages – Coherent Metric, Prediction and Optimization. Submitted to Operations Research.
 - Online: <https://ssrn.com/abstract=3041878>
 - Awarded Best Student Paper at POMS-HK 2018.
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Working Papers

- 1 A Robustness Framework for Resource Allocation with Both Demand and Supply Uncertainty
 - On-going work with Y. F. Lim (SMU) and P. Wang
 - Presented at INFORMS Annual Meeting 2019, Seattle
 - 2 Inventory-responsive Donor Management Policy: A Tandem Queueing Network Model
 - On-going work with Y. Gao (SMU), T. B. N. Yeo and T. Zhu
 - To be presented at INFORMS Annual Meeting 2020
 - 3 A Novel Framework to Control Probabilities in a Pólya Urn Setting Adapted for Optimization
 - On-going work with R. Zuo
 - To be presented at INFORMS Annual Meeting 2020
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Consultancy Projects

- 1 Water Management and Dispatch from a Robust Perspective
With Public Utilities Board and Government Technology Agency, Singapore
Featured on <https://medium.com/dsaid-govtech/using-robust-optimization-and-mixed-integer-programming-to-manage-singapores-water-resources-a0b899afe601>
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Honorary Appointments

Dec 2019 – : Data Science Fellow, Government Technology Agency, Singapore
Present

Professional Employment History

- Jun 2019 – : NUS Business School, National University of Singapore
Present Visiting Assistant Professor, Department of Analytics & Operations
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- Feb 2019 – : Smart Nation and Digital Government Office, Prime Minister's Office
May 2019 Senior Manager, Government Data Office. Roles include:
- Overseeing data governance policies and practices across government agencies and their partners
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- Aug 2018 – : Government Technology Agency (GovTech)
Feb 2019 Quantitative Analyst, Data Science and AI Department. Roles include:
Collaborating with agency policy units to scope, diagnose and analyse quantitatively policy levers, leading to concrete changes in policy actions or products that are integrated in daily policy operations
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- Jan 2014 – : Public Service Division, Prime Minister's Office
Aug 2017 Lead Analyst (HR Intelligence), Strategic Planning & Research.
I served as Team Lead for a team of data scientists, responsible for employing statistical learning, mathematical modelling and optimization with the aim of:
- Evaluating HR policies such as organizational structure, performance management, recruitment, retention and employee engagement
 - Providing consultancy to public service agencies and helping them develop nascent HR Analytics capabilities
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PhD Students

Minglong ZHOU, Department of Analytics & Operations, NUS Business School.	Expected to graduate 2021
Yangge XIAO, Institute of Operations Research & Analytics, NUS.	Expected to graduate 2023

Teaching

2019/2020	: Sectional instructor for first-year Decision Analytics using Spreadsheets
2017	: Tutor for first-year Linear Algebra (Evaluation: 4.2/5.0)

Other Experiences / Achievements

2010 : Trained the Singapore team to the International Mathematics Olympiad (IMO) in Kazakhstan (Observer B)

2007 : Represented Singapore in the IMO in Hanoi (Bronze)
