

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 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
 - 2 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; Applied Probability Society Conference 2019, Brisbane; MSOM Conference 2019, Singapore; Mostly OM 2019, Shenzhen
 - 3 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
 - 4 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 Decision-Driven Regularization
 - On-going work with Q. Tang and Y. Xiao
 - 2 A Robustness Framework for Resource Allocation with Both Demand and Supply Uncertainty
 - On-going work with Y. F. Lim and P. Wang
 - Presented at INFORMS Annual Meeting 2019, Seattle
 - 3 Inventory-responsive Donor Management Policy: A Tandem Queueing Network Model
 - On-going work with Y. Gao, T. B. N. Yeo and T. Zhu
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Consultancy Projects

- 1 Jurong Ports: Scheduling problem of workers to vessels
 - 2 Water Management and Dispatch from a Robust Perspective
 - Work done with Public Utilities Board and Government Technology Agency, Singapore
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- 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

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

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

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:

- Evaluating HR policies such as organizational structure, performance management, recruitment, retention, remuneration, and employee engagement using statistical learning, mathematical modelling and optimization
- Providing consultancy to public service agencies and helping them develop nascent HR Analytics capabilities

PhD Students

Minglong ZHOU, Department of Analytics & Operations, NUS Business School. Expected to graduate 2021

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 in Kazakhstan (Observer B)

2007 : Represented Singapore in the International Mathematics Olympiad in Hanoi (Bronze)
