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Programme: Planning & Operations Management

Introduction:

Dr Joel Tay Wei En joined the Singapore Institute of Manufacturing Technology in 2018 as a research scientist in the Planning & Operations Management Division. His undergraduate degree was from Cambridge University in Mathematics, and his PhD was from the Massachusetts Institute of Technology in Operations Research.

Dr Tay has research expertise in robust and adaptive optimisation and decision-making under uncertainty, with experience in formulating and developing data-driven models and solution heuristics for customer demand prediction and vendor-managed inventory management, including inventory routing and commodity purchasing. His current research projects in SIMTech include the development of a last-mile logistics management platform and adaptive multi-site inventory optimisation models.

Research Interests:

Robust Optimization, Decision-making under Uncertainty, Machine Learning, Data Analytics.

BioNotes:

PhD in Operations Research from Massachusetts Institute of Technology (2018)
MA (Cantab) in Mathematics from Cambridge University (2010)

Publications:

1. Joel Tay, Tony Quek, and Chee Wei Tan, "Interference Alignment as a Rank Constrained Rank Minimization" (2010)
2. Bertsimas, Dimitris, Swati Gupta, Joel Tay. 2018. Scalable Robust and Adaptive Inventory Routing. (submitted to Transportation Science, in revision)
3. Bertsimas, Dimitris, Joel Tay. 2018. Integrated Inventory Routing and Purchasing: A Robust Optimization Approach. (in preparation)