# Publications

## Conference Papers

| Programme Year 2017 - 2018 (4) | |
|---|---|
| 1 | B.X. Li, H. Wang , H.C. Lau, **An Exact Approach for the Vehicle Routing Problem with Location Congestion.** 6th INFORMS Transportation Science and Logistics Society Workshop (TSL 2018), Hong Kong, Jan 2018. |
| 2 | L. Lin, C.K. Han, S.F. Cheng, H. C. Lau, and A. Misra, **Smart Bundling for Crowdsourced Package Deliveries.** 6th INFORMS Transportation Science and Logistics Society Workshop (TSL 2018), Hong Kong, Jan 2018. |
| 3 | S. Shekhar Jha, S.F. Cheng, M. Lowalekar, N. Wong, R. Rajendram, T.K. Tran, P. Varakantham, N.T. Trong, F.B.A. Rahman. **Upping the Game of Taxi Driving in the Age of Uber.** 32nd AAAI Conference on Artificial Intelligence (AAAI-18), New Orleans, USA, Feb 2018. |
| 4 | L. Agussurja, K. Akshat and H. C. Lau. **Resource-Constrained Scheduling for Maritime Traffic Management.** 32nd AAAI Conference on Artificial Intelligence (AAAI-18), New Orleans, USA, Feb 2018. |
| 5 | S.-F. Cheng, S. Shekhar Jha, R. Rajendram. **Taxis strike back: A field trial of the driver guidance system.** Seventeenth International Conference on Autonomous Agents and Multiagent Systems (AAMAS-18), to appear, Stockholm, Sweden, Jul 2018. |
| 6 | S. Shekhar Jha, S.-F. Cheng, R. Rajendram, N. Wong, F. B. A. Rahman, N. T. Trong, M. Lowalekar and P. Varakantham. **A driver guidance system for taxis in Singapore, Seventeenth International Conference on Autonomous Agents and Multiagent Systems.** 17th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-18), Pg 1820-1822, Stockholm, Sweden, Jul 2018. |
| 7 | K. Kulkarni, H.C. Lau, H. Wang, S. Sivabalasingam and K.T. Tran. **Design and Implementation of Decision Support for Traffic Management at Multipurpose Port Gates**. 2018 Winter Simulation Conference (WSC 2018), Gothenburg, Sweden, Dec 2018. |

| Programme Year 2016 - 2017 (3) | |
|---|---|
| 1 | D.T. Nguyen, A. Kumar and H.C. Lau. **Collective Multiagent Sequential Decision Making Under Uncertainty.** 31st AAAI Conference on Artificial Intelligence, San Francisco, California, USA, Feb 2017. |
| 2 | X. Wu, A. Kumar, D. Sheldon, and S. Zilberstein. **Robust Optimization for Tree-Structured Stochastic Network Design**. 31st AAAI Conference on Artificial Intelligence (AAAI 2017), San Francisco, California, USA, Feb 2017. |
| 3 | T.H. Teng, H.C. Lau and A. Kumar. **Prescribing routes to improve safety and efficiency of vessel traffic**. 5th International Maritime and Port Technology and Development Conference (MTEC 2017), Singapore, April 2017. |
| 4 | T.H. Teng, H.C. Lau and A. Kumar. **Coordinating Vessel Traffic to Improve Safety and Efficiency**. 16th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2017), Sao Paulo, Brazil, May 2017. |
| 5 | T.H. Teng, H.C. Lau and A. Kumar. **A Multi-Agent System for Coordinating Vessel Traffic (Demonstration)**. 16th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2017), Sao Paulo, Brazil, May 2017. |
| 6 | T. Verma, P. Varakantham, S. Kraus and H.C. Lau. **Augmenting Decisions of Taxi Drivers through Reinforcement Learning for Improving Revenues**. 27th International Conference on Automated Planning and Scheduling (ICAPS 2017), Pittsburgh, USA, Jun 2017. |
| 7 | B.X. Li and H.C. Lau, **Combinatorial Auction for Transportation Matching Service: Formulation and Adaptive Large Neighborhood Search Heuristic.** 8th International Conference on Computational Logistics 2017 (ICCL 2017), Southampton, UK, Oct 2017. |
| 8 | S. Shekhar Jha, S.F. Cheng, M. Lowalekar, W.H. Wong, R. Rajendram, K.T.Tran, P. Varakantham,N.T. Trong, and F.A. Rahman. **A Real-time Big Data Framework for Taxi Drivers.** 26th ACM International Conference on Information and Knowledge Management (CIKM 2017), Singapore, Nov 2017. |
| 9 | K. Kulkarni, K.T. Tran, H. Wang and H.C. Lau, **Efficient Gate System Operations for a Multi-purpose Port using Simulation-Optimisation.** Winter Simulation Conference 2017 **(**WSC 2017), Las Vegas, USA, Dec 2017. |
| 10 | D.T. Nguyen, A. Kumar and H.C. Lau. **Policy Gradient With Value Function Approximation For Collective Multiagent Planning.** 31st International Conference on Neural Information Processing Systems (NIPS 2017), Long Beach, CA, USA, Dec 2017. |
| 11 | A. Gunawan, H. C. Lau and K. Lu. **Home Health Care Delivery Problem.** Multidisciplinary International Scheduling Conference (MISTA 2017), Kuala Lumpur, Malaysia, Dec 2017. |

| Programme Year 2015 - 2016 (2) | |
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| 1 | Q. Li and H. C. Lau. **A Layered Hidden Markov Model for Predicting Human Trajectories in a Multi-floor Building**. IEEE/WIC/ACM International Conference on Intelligent Agent Technology (IAT), Singapore, December 2015. |
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| 2 | L. Agussurja and H. C. Lau and S.F. Cheng. **Achieving Stable and Fair Profit Allocation with Minimum Subsidy in Collaborative Logistics**. AAAI Conference on Artificial Intelligence (AAAI-16), Phoenix, Arozona, USA, February 2016. |
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| 3 | T. V. Le, S. Liu and H. C. Lau. **Reinforcement Learning Framework for Modeling Spatial Sequential Decisions under Uncertainty**. 15th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2016), Singapore, May 2016. |
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| 4 | H. C. Lau, A. Gunawan, P. Varakantham and W. Wang. **PRESS: PeRsonalized Event Scheduling recommender System**. 15th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2016), Singapore, May 2016. |
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| 5 | D.T. Nguyen, A.Kumar, H.C. Lau and D. Sheldon. **Approximate Inference Using DC Programming For Collective Graphical Models**. 19th International Conference on Artificial Intelligence and Statistics (AISTATS16), Cadiz, Spain, May 2016. |
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| 6 | S. Ghosh, A. Kumar and P. Varakantham. **Probabilistic Inference Based Message-Passing For Resource Constrained DCOPs**. International Workshop on Optimisation in Multi-Agent Systems (OptMAS 2016), Singapore, May 2016. |
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| 7 | T.H. Teng, S. D. Handoko and H. C. Lau. **Self-Organizing Neural Network for Adaptive Operator Selection in Evolutionary Search**. In Proc 10th Learning and Intelligent OptimizatioN Conference (LION-16), Naples, Italy, June 2016. |
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| 8 | P. Agrawal, P. Varakantham and W. Yeoh. **Scalable Greedy Algorithms For Task/Resource Constrained Multi-Agent Stochastic Planning.** Algorithmic Game Theory Workshop at 25th International Joint Conference on Artificial Intelligence (AGT-IJCAI 2016), New York City, USA, July 2016. |
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| 9 | B.X. Li, K.W. Tan and K.T. Tran. **Traffic Simulation Model for Port Planning and Congestion Prevention**. Winter Simulation Conference 2016 (WSC 2016), Washington, D.C., USA, Dec 2016. |
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| 10 | T.H. Teng, S.F. Cheng, T.N. Truong and H.C. Lau. **Managing Egress of Crowd During Infrastructure Disruption**. Winter Simulation Conference 2016 (WSC 2016), Washington, D.C., USA, Dec 2016. |

| Programme Year 2014 - 2015 (1) | |
|---|---|
| 1 | J. Du, S. F. Cheng and H. C. Lau. **Designing Bus Transit Services for Routine Crowd Situations at Large Event Venues**. 6th International Conference on Computational Logistics (ICCL) (LNCS), Delft, The Netherlands, September 2015. |
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| 2 | Dongchang Liu, Shih-Fen Cheng, and Yiping Yang. **Density peaks clustering approach for discovering demand hot spots in city-scale taxi fleet dataset**. 18th International IEEE Conference on Intelligent Transportation Systems (ITSC-15), Canary Islands, Spain, September 2015. |
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| 3 | C. Wang, H. C. Lau and Y. F. Lim. **A Rolling Horizon Auction Mechanism and Virtual Pricing of Shipping Capacity for Urban Consolidation Centers**. 6th International Conference on Computational Logistics (ICCL) (LNCS), Delft, The Netherlands, September 2015. |
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| 4 | D. T. Nguyen, H. C. Lau, A. Kumar. **Decomposition Techniques for Urban Consolidation Problems**. IEEE Conf. Automation Science and Engineering (CASE), Gothenburg, Sweden, August 2015. |
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| 5 | D. Handoko and H. C. Lau. **Efficient Order Sharing with Privacy Preservation via Double Auction with Split Delivery**. IEEE Conf. Automation Science and Engineering (CASE), Gothenburg, Sweden, August 2015. |
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| 6 | T. Sun, D. Sheldon and A. Kumar. **Message Passing for Collective Graphical Models**. International Conference on Machine Learning (ICML), Lille, France, July 2015. |
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| 7 | Stephanus Daniel Handoko and Hoong Chuin Lau. **Enabling Carrier Collaboration Via Order Sharing Double Action: A Singapore Urban Logistics Perspective**. 9th International Conference on City Logistics, Tenerife, Spain, June 2015. |
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| 8 | R. de Souza, H. C. Lau, M. Goh, W. S. Ng, P.S. Tan and Lindawati. **Retail Precinct Management: A Case of Commercial Decentralization in Singapore**. 9th International Conference on City Logistics, Tenerife, Spain, June 2015. |