

## Publications

### Conference Papers

#### Programme Year 2018 - 2019 (5)

1	D. T. Nguyen, A. Kumar and H.C. Lau, <b>Credit Assignment For Collective Multiagent RL With Global Rewards</b> . 32nd Conference on Neural Information Processing Systems (NIPS 2018), Montréal, Canada, Dec 2018.
2	A. J. Singh, D. T. Nguyen, A. Kumar and H.C. Lau, <b>Multiagent Decision Making For Maritime Traffic Management</b> . 33rd AAAI Conference on Artificial Intelligence (AAAI-19), Hawaii, USA, Jan 2019.
3	B.X. Li, S. S. Jha, and H. C. Lau, <b>Route Planning for a Fleet of Electric Vehicles with Waiting Times at Charging Stations</b> . 19th European Conference on Evolutionary Computation in Combinatorial Optimisation (EvoCOP 2019), Leipzig, Germany, Apr 2019.

#### Programme Year 2017 - 2018 (4)

1	B.X. Li, H. Wang , H.C. Lau, <b>An Exact Approach for the Vehicle Routing Problem with Location Congestion</b> . 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, <b>Smart Bundling for Crowdsourced Package Deliveries</b> . 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. <b>Upping the Game of Taxi Driving in the Age of Uber</b> . 32nd AAAI Conference on Artificial Intelligence (AAAI-18), New Orleans, USA, Feb 2018.
4	L. Agussurja, K. Akshat and H. C. Lau. <b>Resource-Constrained Scheduling for Maritime Traffic Management</b> . 32nd AAAI Conference on Artificial Intelligence (AAAI-18), New Orleans, USA, Feb 2018.
5	S.-F. Cheng, S. Shekhar Jha, R. Rajendram. <b>Taxis strike back: A field trial of the driver guidance system</b> . 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. <b>A driver guidance system for taxis in Singapore, Seventeenth International Conference on Autonomous Agents and Multiagent Systems</b> . 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. <b>Design and Implementation of Decision Support for Traffic Management at Multipurpose Port Gates</b> . 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. <b>Collective Multiagent Sequential Decision Making Under Uncertainty</b> . 31st AAAI Conference on Artificial Intelligence, San Francisco, California, USA, Feb 2017.
2	X. Wu, A. Kumar, D. Sheldon, and S. Zilberstein. <b>Robust Optimization for Tree-Structured Stochastic Network Design</b> . 31st AAAI Conference on Artificial Intelligence (AAAI 2017), San Francisco, California, USA, Feb 2017.
3	T.H. Teng, H.C. Lau and A. Kumar. <b>Prescribing routes to improve safety and efficiency of vessel traffic</b> . 5th International Maritime and Port Technology and Development Conference (MTEC 2017), Singapore, April 2017.
4	T.H. Teng, H.C. Lau and A. Kumar. <b>Coordinating Vessel Traffic to Improve Safety and Efficiency</b> . 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. <b>A Multi-Agent System for Coordinating Vessel Traffic (Demonstration)</b> . 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. <b>Augmenting Decisions of Taxi Drivers through Reinforcement Learning for Improving Revenues</b> . 27th International Conference on Automated Planning and Scheduling (ICAPS 2017), Pittsburgh, USA, Jun 2017.
7	B.X. Li and H.C. Lau, <b>Combinatorial Auction for Transportation Matching Service: Formulation and Adaptive Large Neighborhood Search Heuristic</b> . 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. <b>A Real-time Big Data Framework for Taxi Drivers</b> . 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, <b>Efficient Gate System Operations for a Multi-purpose Port using Simulation-Optimisation</b> . Winter Simulation Conference 2017 (WSC 2017), Las Vegas, USA, Dec 2017.

10	D.T. Nguyen, A. Kumar and H.C. Lau. <b>Policy Gradient With Value Function Approximation For Collective Multiagent Planning</b> . 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. <b>Home Health Care Delivery Problem</b> . Multidisciplinary International Scheduling Conference (MISTA 2017), Kuala Lumpur, Malaysia, Dec 2017.

#### Programme Year 2015 - 2016 (2)

1	Q. Li and H. C. Lau. <b>A Layered Hidden Markov Model for Predicting Human Trajectories in a Multi-floor Building</b> . IEEE/WIC/ACM International Conference on Intelligent Agent Technology (IAT), Singapore, December 2015.
2	L. Agussurja and H. C. Lau and S.F. Cheng. <b>Achieving Stable and Fair Profit Allocation with Minimum Subsidy in Collaborative Logistics</b> . AAAI Conference on Artificial Intelligence (AAAI-16), Phoenix, Arozona, USA, February 2016.
3	T. V. Le, S. Liu and H. C. Lau. <b>Reinforcement Learning Framework for Modeling Spatial Sequential Decisions under Uncertainty</b> . 15th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2016), Singapore, May 2016.
4	H. C. Lau, A. Gunawan, P. Varakantham and W. Wang. <b>PRESS: PeRsonalized Event Scheduling recommender System</b> . 15th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2016), Singapore, May 2016.
5	D.T. Nguyen, A.Kumar, H.C. Lau and D. Sheldon. <b>Approximate Inference Using DC Programming For Collective Graphical Models</b> . 19th International Conference on Artificial Intelligence and Statistics (AISTATS16), Cadiz, Spain, May 2016.
6	S. Ghosh, A. Kumar and P. Varakantham. <b>Probabilistic Inference Based Message-Passing For Resource Constrained DCOPs</b> . International Workshop on Optimisation in Multi-Agent Systems (OptMAS 2016), Singapore, May 2016.
7	T.H. Teng, S. D. Handoko and H. C. Lau. <b>Self-Organizing Neural Network for Adaptive Operator Selection in Evolutionary Search</b> . In Proc 10th Learning and Intelligent OptimizatioN Conference (LION-16), Naples, Italy, June 2016.
8	P. Agrawal, P. Varakantham and W. Yeoh. <b>Scalable Greedy Algorithms For Task/Resource Constrained Multi-Agent Stochastic Planning</b> . Algorithmic Game Theory Workshop at 25th International Joint Conference on Artificial Intelligence (AGT-IJCAI 2016), New York City, USA, July 2016.
9	B.X. Li, K.W. Tan and K.T. Tran. <b>Traffic Simulation Model for Port Planning and Congestion Prevention</b> . Winter Simulation Conference 2016 (WSC 2016), Washington, D.C., USA, Dec 2016.
10	T.H. Teng, S.F. Cheng, T.N. Truong and H.C. Lau. <b>Managing Egress of Crowd During Infrastructure Disruption</b> . 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. <b>Designing Bus Transit Services for Routine Crowd Situations at Large Event Venues</b> . 6th International Conference on Computational Logistics (ICCL) (LNCS), Delft, The Netherlands, September 2015.
2	Dongchang Liu, Shih-Fen Cheng, and Yiping Yang. <b>Density peaks clustering approach for discovering demand hot spots in city-scale taxi fleet dataset</b> . 18th International IEEE Conference on Intelligent Transportation Systems (ITSC-15), Canary Islands, Spain, September 2015.
3	C. Wang, H. C. Lau and Y. F. Lim. <b>A Rolling Horizon Auction Mechanism and Virtual Pricing of Shipping Capacity for Urban Consolidation Centers</b> . 6th International Conference on Computational Logistics (ICCL) (LNCS), Delft, The Netherlands, September 2015.
4	D. T. Nguyen, H. C. Lau, A. Kumar. <b>Decomposition Techniques for Urban Consolidation Problems</b> . IEEE Conf. Automation Science and Engineering (CASE), Gothenburg, Sweden, August 2015.
5	D. Handoko and H. C. Lau. <b>Efficient Order Sharing with Privacy Preservation via Double Auction with Split Delivery</b> . IEEE Conf. Automation Science and Engineering (CASE), Gothenburg, Sweden, August 2015.
6	T. Sun, D. Sheldon and A. Kumar. <b>Message Passing for Collective Graphical Models</b> . International Conference on Machine Learning (ICML), Lille, France, July 2015.
7	Stephanus Daniel Handoko and Hoong Chuin Lau. <b>Enabling Carrier Collaboration Via Order Sharing Double Action: A Singapore Urban Logistics Perspective</b> . 9th International Conference on City Logistics, Tenerife, Spain, June 2015.
8	R. de Souza, H. C. Lau, M. Goh, W. S. Ng, P.S. Tan and Lindawati. <b>Retail Precinct Management: A Case of Commercial Decentralization in Singapore</b> . 9th International Conference on City Logistics, Tenerife, Spain, June 2015.