

Publications

Conference Papers

Programme Year 2019 - 2020 (6)

1	W. Joe and H. C. Lau, Deep Reinforcement Learning Approach to Solve Dynamic Vehicle Routing Problem with Stochastic Customers . In Proc. 30th International Conference on Automated Planning and Scheduling (ICAPS 2020), Nice, France, June 2020.
2	A. Singh, A. Kumar and H. C. Lau, Hierarchical Multiagent Reinforcement Learning for Maritime Traffic Management . In Proc. 19th International Conference on Autonomous Agents and Multiagent Systems(AAMAS 2020), Auckland, New Zealand, May 2020.

Programme Year 2018 - 2019 (5)

1	D. T. Nguyen, A. Kumar and H.C. Lau, Credit Assignment For Collective Multiagent RL With Global Rewards . 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, Multiagent Decision Making For Maritime Traffic Management . 33rd AAAI Conference on Artificial Intelligence (AAAI-19), Hawaii, USA, Jan 2019.
3	B.X. Li, S. S. Jha, and H. C. Lau, Route Planning for a Fleet of Electric Vehicles with Waiting Times at Charging Stations . 19th European Conference on Evolutionary Computation in Combinatorial Optimisation (EvoCOP 2019), Leipzig, Germany, Apr 2019.
4	C.K Han, S.F. Cheng and P. Varakantham, A Homophily-Free Community Detection Framework for Trajectories with Delayed Responses . 18th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2019), Montréal, Canada, May 2019.
5	T. Verma, P. Varakantham and H. C. Lau, Entropy Based Independent Learning in Anonymous Multi-Agent Settings . 29th International Conference on Automated Planning and Scheduling (ICAPS 2019), Berkeley, USA, Jul 2019.
6	T. Verma and P. Varakantham, Correlated Learning for Aggregation Systems . Conference on Uncertainty in Artificial Intelligence (UAI 2019), Tel aviv, Israel, Jul 2019.
7	S. Bhatnagar, A. Kumar and H. C. Lau, Decision Making for Improving Maritime Traffic Safety Using Constraint Programming . 28th International Joint Conference on Artificial Intelligence (IJCAI 2019), Macao, China, Aug 2019.
8	J. Chase, D. T. Nguyen, H.Y. Sun and H. C. Lau, Improving Law Enforcement Daily Deployment Through Machine Learning-Informed Optimization under Uncertainty . 28th International Joint Conference on Artificial Intelligence (IJCAI 2019), Macao, China, Aug 2019.

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	T. H. Teng, H. C. Lau and A. Gunawan. Selection of AOS Methods for Solving Combinatorial Optimisation Problems via Neural Networks . 12nd Conference on Learning and Intelligent Optimization (LION-18), Kalamata, Greece, Jun 2018.
6	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.
7	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 (AAMAS-18), Pg 1820-1822, Stockholm, Sweden, Jul 2018.
8	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,
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)

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.
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.
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,
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.
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.
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.
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.
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.
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.
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.
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.
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.
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.
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.
6	T. Sun, D. Sheldon and A. Kumar. Message Passing for Collective Graphical Models. International Conference on Machine Learning (ICML), Lille, France, July 2015.
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.
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.