

Curriculum Vitae

[Transport DTU](#)
DTU Management
Technical University of Denmark

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EDUCATION

Ph.D., The University of Hong Kong, Hong Kong, 2014

M.Sc. in Transportation System Management, National University of Singapore, Singapore, 2008-2009

Bachelor in Management, Shandong University, China, 2003-2007

WORKING EXPERIENCE

Assistant Professor, Danmarks Tekniske Universitet (DTU), Apr 2017 – present

Network Infrastructure Analyst, Environmental Change Institute (ECI), Oxford University, Oct 2016 – March 2017

Senior Research Associate, Lancaster University Management School (LUMS), Oct 2015 – Oct 2016

Postdoctoral Fellow, The University of Hong Kong (HKU), Sep 2014 – Sep 2015

Research Assistant, The University of Hong Kong (HKU), Feb 2014 – Aug 2014

RESEARCH PROJECTS

1. Autonomous Bus Demand Modelling and Optimization from Big Data
 - 2/3 PhDs funds from DTU-NTU alliance (around 1 million DKK)
2. NExt generation Mobility and Emission management SYStems: dynamic pricing and tradable credits
 - 2/3 PhDs funds from DTU-NTU alliance (around 1 million DKK)
3. Travel funds for attending conference aboard from Otto Mønstedts Fond (15, 269 DKK)

ACADEMIC SERVICES

| | |
|-------------------------|--|
| Guest Editor | Special Issue: Methods and Technologies for Next-Generation Public Transport Planning and Operations (MTNPT) in Journal of Advanced Transportation |
| Reviewer | Transportation Research Part A, B, C, D, E, Transportmetrica A, B IEEE ITS Transactions, European Journal of Operational Research Computers & Industrial Engineering, Journal of Intelligent Transportation Systems Journal of Transportation Engineering, Networks and Spatial Economics IET Intelligent Transport Systems, Journal of Air Transport Management Computer-Aided Civil and Infrastructure Engineering, Journal of Intelligent Transportation Systems |
| Conference Chair | Section Chair in <i>Transit Scheduling</i> 22 th HKSTS conference Section Chair in <i>the 7th International Symposium on Dynamic Traffic Assignment (DTA)</i> Section Chair in <i>CASPT 2018</i> |

HONORS AND AWARDS

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| 1st Runner up of HKSTS Outstanding Student Paper Award | 2014 |
| Nominated for Li Ka Shing Prize, Awards for Outstanding Research Postgraduate Student | 2015 |

PEDAGOGY DEVELOPMENT

Teaching

1. Integer Programming (Master level)
 - 2018 and 2019 Fall
 - Large class, more than 100 students
2. Planning and Modelling of Public Transport (Master level)
 - 2019, 2020, 2021 spring
 - Small class, 25 - 35 students

Training

1. Education in University Teaching (UDTU). Technical University of Denmark, 2017 – 2019.
2. Teaching and learning in higher education. The University of Hong Kong, 2014

Supervision Experience

PhDs in DTU

| Name | Research Topic | Time |
|---------------------|---|-------------|
| Rong Cheng DTU | Planning and Operating for Integrated Passengers and Goods Transportation System Using Shared Autonomous Vehicles | 2021 - 2023 |
| Liu Renming DTU-NTU | Smart Mobility Management and Operation under Tradeable Credit Scheme | 2019 - 2022 |
| Kelvin Lee, DTU-NTU | Autonomous Bus Demand Modeling and Optimization from Big Data | 2018 - 2022 |

Visiting PhDs in DTU

| Name | Research Topic | Time |
|----------------|--|-------------|
| Lishuang Bian | Pricing in complementary transport services | 2021 - 2022 |
| Mingzhuang Hua | Machine learning and joint prediction of bike and metro flow | 2021 - 2022 |
| Mingmei Sun | Traffic assignment and bounded rationality | 2020 - 2021 |
| Xin Chen | Schedule-Based Transit Assignment: Model and Calibration | 2020 - 2021 |
| Jia Ning | Optimization of last train timetabling | 2019 - 2021 |
| Yu Yifan | Capacity evaluation for multimodal transport network | 2018 - 2019 |
| Ye Jiao | Multimodal network design | 2018 - 2019 |

Internship

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|------------|--|--------------------|
| Kelvin Lee | Data-Driven Bus Schedule Synchronization | Sep 2017- Dec 2017 |
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MSc

| Name | Research Topic | Time |
|--------------------------|--|------|
| Pei Cao, DTU | Optimal scheduling of electric autonomous buses under battery constraints | 2020 |
| Guojian Zhu, DTU | Mobility assessment for transport infrastructure expansion: framework and a case study | 2019 |
| Yuqing Fu, visiting Msc | A Hyper-Heuristic Method to the Integrated Bicycle Sharing Network Design | 2018 |
| Rong Cheng, visiting Msc | Emergency location routing problem | 2018 |

Undergraduate student

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|-------------------|--|------|
| Cheung, Y.I., HKU | Optimization method transport network design problem (Grade A) | 2015 |
|-------------------|--|------|

Research Assistant

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|--------------|---|------|
| Ng, T.M, HKU | Transit network design (published in a peer review journal) | 2012 |
|--------------|---|------|

Publication List

[Transport DTU](#)

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| | No. of Publications | <i>h</i> -index | Sum of Times Cited |
|----------------|---------------------|-----------------|--------------------|
| Web of Science | 21 | 12 | 559 |
| Scopus | 22 | 13 | 670 |
| Google Scholar | - | 13 | 913 |

Accessed 24th March 2021

Journal Highlights

| Journal | IF (rank in JCR Category) | No. of Published |
|---------------------------------------|---|------------------|
| <i>Transportation Research Part B</i> | 4.796 (3/37 in Transportation) | 5 |
| <i>Transportation Research Part C</i> | 6.077 (4/36 in Transportation Science & Technology) | 5 |
| <i>Transportation Research Part E</i> | 4.69 (4/37 in Transportation) | 1 |

Conference Highlights

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|---|---|
| <i>International Symposium on Transportation and Traffic Theory (ISTTT)</i> | 2 |
|---|---|

Refereed Journal Papers

1. Jiang, Y., Ceder, A., 2021. Incorporating Personalization and Bounded Rationality into Stochastic Transit Assignment Model. Accepted for *ISTTT24 PODIUM presentation* and *Transportation Research Part C*.
2. Jiang, Y., 2021. Reliability-based Equitable Transit Frequency Design. *Transportmetrica A*, 1-50
3. Jiang, Y., Zografos, K.G., 2021. A decision making framework for incorporating fairness in allocating slots at capacity-constrained airports. *Transportation Research Part C*, 126, 103039
4. Jiang, Y., Wang, Y., Szeto, W.Y., Chow, A.H., Nagurney, A., 2020. Probabilistic assessment of network vulnerability with equilibrium flows by meta-heuristics. *International Journal of Sustainable Transportation*, 1-12.
5. Zhong, S.P., Cheng, R., Jiang, Y., Nielsen, O.A., Larson, A., 2020. Risk-averse optimization of disaster relief facility location and vehicle routing under stochastic demand. *Transportation Research Part E*, 141, 102015.
6. Ceder, A., Jiang, Y., 2020. Route Guidance Ranking Procedures with Human Perception Consideration for Personalized Public Transport Service. *Transportation Research Part C*, 118, 102667.
7. Tang, Y.L., Jiang, Y., Hai, Y., Nielsen, O.A., 2020. Modeling and optimizing a fare incentive strategy to manage queuing and crowding in mass transit system. *Transportation Research Part B*, 138, 247-267.
8. Zhong, S.P., Cheng, R., Li, X.F., Wang, Z., Jiang, Y., 2020. Identifying the combined effect of shared autonomous vehicles and congestion pricing on regional job accessibility. *The Journal of Transportation and Land Use*, 13, 273-297
9. Ceder, A., Jiang, Y., 2019. Personalized public transport mobility service: a journey ranking approach for route guidance. *Transportation Research Procedia*, 38, 935-955.
10. Zografos, K. G., Jiang, Y., 2019. A Bi-objective efficiency-fairness model for scheduling slots at congested airports. *Transportation Research Part C*, 102, 336-350.
11. Jiang, Y., Szeto, W.Y., 2016. Reliability-based stochastic transit assignment: formulations and capacity paradox. *Transportation Research Part B*, 93, 181-206.
12. Jiang, Y., Szeto, W.Y., 2016. Multi-class dynamic traffic assignment with physical queues: intersection-movement-based formulation and paradox. *Transportmetrica A*, 12(10), 878-908.
13. Jiang, Y., Szeto, W.Y., 2015. Time-dependent transport network design that considers health cost. *Transportmetrica A*, 11(1), 74-101.

14. Szeto, W.Y., Jiang, Y., Wang, D.Z.W., Sumalee, A., 2015. A sustainable road network design problem with land use transportation interaction over time. *Networks and Spatial Economics*, 15(3), 791-822.
15. Hamdouch, Y., Szeto, W.Y., Jiang, Y., 2014. A new schedule-based transit assignment model with travel strategies and supply uncertainties. *Transportation Research Part B*, 67, 35-67.
16. Szeto, W.Y., Jiang, Y., 2014. Transit route and frequency design: Bi-level modeling and hybrid artificial bee colony algorithm approach. *Transportation Research Part B*, 67, 235-263.
17. Szeto, W.Y., Jiang, Y., 2014. Transit assignment: approach-based formulation, extragradient method, and paradox. *Transportation Research Part B*, 62, 51-76.
18. Jiang, Y., Szeto, W.Y., Ng, T.M., Ho, S.C., 2013. The reliability-based stochastic transit assignment problem with elastic demand. *Journal of the Eastern Asia Society for Transportation Studies*, 10, 831-850.
19. Jiang, Y., Szeto, W.Y., Ng, T.M., 2013. Transit network Design: a Hybrid enhanced artificial bee colony approach and a case study. *International Journal of Transportation Science and Technology*, 2 (3), 243-260.
20. Szeto, W.Y., Jiang, Y., Wong, K.I., Solayappan, M., 2013. Reliability-based stochastic transit assignment with capacity constraints: formulation and solution method. *Transportation Research Part C*, 35, 286-304.
21. Yan, Y., Liu, Z., Meng, Q., Jiang, Y., 2013. Robust optimization model of bus transit network design with stochastic travel time. *Journal of Transportation Engineering*, 139 (6), 625-634.
22. Szeto, W.Y., Jiang, Y., 2012. Hybrid artificial bee colony algorithm for transit network design. *Transportation Research Record*, 2284, 47-56.
23. Szeto, W.Y., Jiang, Y., Sumalee, A., 2011. A cell-based model for multi-class doubly stochastic dynamic traffic assignment. *Computer-Aided Civil and Infrastructure Engineering*, 26 (8), 595-611.
24. Szeto, W.Y., Solayappan, M., Jiang, Y., 2011. Reliability-based transit assignment for congested stochastic transit networks. *Computer-Aided Civil and Infrastructure Engineering*, 26 (4), 311-326.

Papers Under Review/Revision

1. Jiang, Y., Rasmussen, T.K., Nielsen, O.A., Integrated Optimisation of Transit Networks with both Schedule- and Frequency-based Services Considering Passengers Route Choice Responses According to a Bounded Stochastic User Equilibrium. Major revision in *Transportation Science*. Resubmission deadline 15-June-2021
2. Lee, K., Jiang, Y., Ceder, A., Dauwels, J., Su, R., Nielsen, O.A., Path-Oriented Synchronized Scheduling Using Time-Dependent Data. Under 1st round review in *CASPT 2021* full paper track.
3. Liu, R.M., Chen, S.Y., Jiang, Y., Seshadri, R., Ben-Akiva, M.E., Azevedo, C.L., Managing network congestion with tradable credits scheme: a trip-based MFD approach. Under 2nd round review in *Transportation Research Part C*.
4. Zhong, S.P., Jiang, Y., Nielsen, O.A., Lexicographic Multi-Objective Road Pricing Optimization Considering Land Use and Transportation Effects. Under 2nd round review in *European Journal of Operational Research*.
5. Ye, J., Jiang, Y., Chen, J., Liu, Z.Y., Guo, R.Z., Joint Optimization of Transfer Location and Capacity for a Capacitated Multimodal Transport Network with Elastic Demand: Bilevel Modeling and Paradoxes. Under 1st round review in *Transportation Research Part E*.
6. Ye, J., Thorhauge, M., Jiang, Y., Chen, J., Nielsen, O.A., Analysis of Intermodal Travel Behavior: A Case Study from the Nanjing Metropolitan Area. Under 1st round review in *Travel Behaviour and Society*.

Selected Conference Proceedings/Abstracts/Presentations

1. Ye, J., Thorhauge, M., Jiang, Y., Jun, C., Nielsen, O., A., 2020, Analysis of Intermodal Travel Behavior: A Case Study from the Nanjing Metropolitan Area. Transportation Research Board (TRB) 99th annual meeting, January 9th-13th, Washington D.C., USA
2. Peled, I., Lee, K., Jiang, Y., Dauwels, J., Pereira, F.C., 2019. Preserving Uncertainty in Demand Prediction for Autonomous Mobility Services. In 2019 IEEE Intelligent Transportation Systems Conference (ITSC), 3043-3048, IEEE.

3. Liu, T., Jiang, Y., Ceder, A., Gasson, R., Cheyne, L., 2019. Smartphone-based Public Transport Guidance: An Investigation of Potential Benefits. In 2019 IEEE Intelligent Transportation Systems Conference (ITSC), 245-250, IEEE.
4. Jiang, Y., 2018. Equitable Transit Network Design Under Uncertainty. *CASPT 2018*.
5. Jiang, Y., Ceder, A., 2018. Assessing the Impact of Future Personalized Public Transport. *CASPT 2018*.
6. Jiang, Y., Lee, K., 2018. Scheduling Synchronization with Time-Dependent Data. *DTA 2018*.
7. Zhong, S.P., Cheng, R., Jiang, Y., 2018. α -Reliable Mean-Excess Regret Model for Emergency Location Routing Problem Under Demand Uncertainty. *TSTE 2018*.
8. Zhong, S.P., Cheng, R., Jiang, Y., 2018. A bi-objective model to stochastic emergency location routing problem. *COTA CICTP 2019*.
9. Jiang, Y., M. Eltvad, O. A. Nielsen, T. K. Rasmussen, and R. D. Frederiksen. 2017. Integrated optimisation for public transport system with joint schedule- and frequency-based services. *HKSTS 2017*.
10. Jiang, Y., Zografos, K.G., 2016. Modelling fairness in slot scheduling decisions at capacity-constrained airports. *TRB 2016*.
11. Zografos, K.G., Jiang, Y., 2016. Modeling and solving the airport slot scheduling problem with efficiency, fairness, and accessibility considerations. *TRISTAN IX*.
12. Jiang, Y., Szeto, W.Y., 2016. A multi-class approach-proportion-based dynamic user optimal route choice problem. *TRISTAN IX*.
13. Jiang, Y., Szeto, W.Y., Long, J.C., Han, K. 2016. Multi-class dynamic traffic assignment: approach-proportion-based formulation and car-truck interaction paradox. *DTA 2016*.
14. Jiang, Y., Szeto, W.Y., 2015, Reliability-based transit assignment formulation and a capacity paradox. *The 6th international Symposium on Transportation Network Reliability*, August 2-3, 2015, Nara, Japan
15. Jiang, Y., Szeto, W.Y., 2013., Reliability-based Stochastic Transit Assignment Problem with Elastic Demand. Presented at *EASTS 2013*, Taipei.
16. Jiang, Y., Szeto, W.Y., 2013., Reliability-based Stochastic Transit Assignment: Formulations and a Paradox. Presented at *HKSTS 2013*, Hong Kong.
17. Jiang, Y., Szeto, W.Y., 2012., Bilevel transit network design: hybrid artificial bee colony algorithm. Presented at *HKSTS 2012*, Hong Kong.
18. Jiang, Y., Szeto, W.Y., 2012., Doubly Stochastic Transit Assignment. Presented at *INSTR 2012*, Hong Kong.
19. Jiang, Y., Szeto, W.Y., 2012., A Simultaneous Bus Route Design and Frequency Setting Problem: A Hybrid Artificial Bee Colony Algorithm Approach. Presented at *HKSTS 2011*, Hong Kong.
20. Jiang, Y., Szeto, W.Y., Wong, S.C, 2010. Risk-averse stochastic transit assignment. *Proceedings of the 15th International Conference of Hong Kong Society for Transportation Studies*. December 11-14, 2010, Hong Kong, 325-325
21. Szeto, W.Y., Solayappan, M., Jiang, Y., Wong, K.I., 2010. Reliability-based stochastic user equilibrium transit assignment. *Proceedings of the 4th International Symposium on Transportation Network Reliability*.
22. Szeto, W.Y., Jiang, Y., 2010. A bilevel transit network design problem with transfer penalty. Abstracts book of the 4th *Nordic Optimization Symposium*.
23. Szeto, W.Y., Jiang, Y., Solayappan, M., 2009. Time-dependent road network design frameworks with land use consideration: the issue of sustainability. *Proceedings of the Eastern Asia Society for Transportation Studies*, 34-49.