

# He Wang

Mail Address: 765 Ferst Dr, Atlanta, GA 30332-0205  
Office Phone: (404) 385-4791 · Email: [he.wang@isye.gatech.edu](mailto:he.wang@isye.gatech.edu)

## Academic Employment

---

**Georgia Institute of Technology**, Atlanta, GA

*H. Milton Stewart School of Industrial and Systems Engineering*

- Colonel John B. Day Early Career Professor, Aug 2020 – present
- Assistant Professor, Jan 2017 – present

## Education

---

**Massachusetts Institute of Technology**, Cambridge, MA

Ph.D. in Operations Research, 2016

S.M. in Transportation, 2013

*Advisor: Prof. David Simchi-Levi*

**Tsinghua University**, Beijing, China

B.S. in Industrial Engineering, 2011

B.S. in Pure and Applied Mathematics, 2011

## Research Interests

---

- Revenue management; dynamic pricing; supply chain management; e-commerce; logistics and transportation; statistical learning; online learning

## Honors & Awards

---

- Second place, “Doing Good with Good OR” Student Paper Competition (awarded to student advised), 2019.
- First place, MSOM Student Paper Competition (awarded to student advised), 2019.
- Amazon Research Award, 2019.
- First place, INFORMS Junior Faculty Interest Group (JFIG) Paper Competition, 2018.
- Finalist, MSOM Student Paper Competition (awarded to student advised), 2018.
- Class of 1969 Teaching Fellow, Georgia Tech, 2017.
- Finalist, IBM Service Science Best Student Paper Award, 2015.
- Second place, Chinese Scholars Association for Management Science and Engineering

(CSAMSE) Best Paper Award, 2013.

- Edward H. Linde (1962) MIT Presidential Graduate Fellowship, 2011.
- Outstanding Graduate of Tsinghua University (ranked 1<sup>st</sup> among students majored in Industrial Engineering), 2011.
- Chinese National Scholarship, awarded by the Chinese Ministry of Education, 2009.
- Tsinghua Tung OOCL Scholarship for academic excellence, 2008, 2010.

## Publications

---

### Preprints / Under Review

- Yasaman Mohammadshahi, Pinar Keskinocak, Beril Toktay, He Wang. "Priority-Based Inspection Strategies for Environmental Compliance." Under review at *Manufacturing & Service Operations Management*.
- Pornpawee Bumpensanti, Martin Savelsbergh, He Wang. "Integrated pricing and routing for package express carriers." Under review at *Transportation Science*.
- Junxuan Li, Alejandro Toriello, He Wang, Seth Borin, Christina Gallarno. "Dynamic Inventory Allocation in Dillard's Fashion Retail Network." Under 3<sup>rd</sup> round review (minor revision) at *INFORMS Journal of Applied Analytics*.
- Mila Nambiar, David Simchi-Levi, and He Wang. "Dynamic inventory allocation with demand learning for seasonal goods." Under review at *Production and Operations Management*.
- Sushil Mahavir Varma, Pornpawee Bumpensanti, Siva Theja Maguluri, and He Wang. "Dynamic pricing and matching for two-sided queues." Under major revision at *Operations Research*.
  - Extended abstract appeared in *ACM SIGMETRICS 2020*.
- Shixiang Zhu, He Wang, and Yao Xie. "Atlanta police zone redesign: a data-driven optimization approach."
  - *Second place, 2019 INFORMS "Doing Good with Good OR" Student Paper Competition (awarded to S. Zhu)*.
- Rivera, A., Wang, H., and Xu, H. "Online Saddle Point Problem with Applications to Constrained Online Convex Optimization." Under 2<sup>nd</sup> round review (major revision) at *Mathematics of Operations Research*.

- Cao, Y., Kleywegt, A., and Wang, H. "Network revenue management under a spiked multinomial logit choice model." Under 2<sup>nd</sup> round review (major revision) at *Operations Research*.

### Journal Publications

- Bumpensanti, P. and Wang, H. (2020). "A re-solving heuristic with uniformly bounded loss for network revenue management." *Management Science*, 66(7), pp.2993-3009.
  - First place, 2018 INFORMS Junior Faculty Interest Group (JFIG) Paper Competition.
  - Finalist, 2018 MSOM Student Paper Competition (awarded to P. Bumpensanti).
- Nambiar, M., Simchi-Levi, D. and Wang, H. (2019). "Dynamic learning and pricing with model misspecification." *Management Science* 65(11), pp.4980-5000.
  - First place, 2019 MSOM Student Paper Competition (awarded to M. Nambiar).
- Simchi-Levi, D., Wang, H. and Wei, Y. (2018). "Constraint generation for two-stage robust network flow problem." *INFORMS Journal on Optimization*, 1(1), pp.49-70.
- Ferreira, K. J., Simchi-Levi, D. and Wang, H. (2018) "Online network revenue management using Thompson sampling." *Operations Research*, 66(6), pp.1586-1602.
  - Finalist in 2015 IBM Service Science Best Student Paper Award.
- Simchi-Levi, D., Wang, H. and Wei, Y. (2018). "Increasing supply chain robustness through process flexibility and inventory." *Production and Operations Management*, 27(8), pp.1476-1491.
  - Second place in 2013 Chinese Scholars Association for Management Science and Engineering (CSAMSE) Best Paper Award.
- Cheung, W. C., Simchi-Levi, D. and Wang, H. (2017). "Dynamic pricing and demand learning with limited price experimentation." *Operations Research*, 65(6), pp.1722-1731.
- Wang, H., Huang, S., Liu, Z. and Zheng, L. (2013). "Optimal tanker chartering decisions with spot freight rate dynamics considerations." *Transportation Research Part E*, 51, pp.109-116.

### Conference Proceedings

- Sushil M. Varma, Pornpawee Bumpensanti, Siva Theja Maguluri, He Wang. (2020). "Dynamic pricing and matching for two-sided queues." *ACM SIGMETRICS*.
- Adrian Rivera Cardoso, He Wang, Huan Xu. (2019). "Large scale Markov decision

processes with changing rewards." *Advances in Neural Information Processing Systems (NeurIPS)*.

- Adrian Rivera Cardoso, Jacob Abernethy, He Wang, Huan Xu. (2019). "Competing against Nash equilibria in adversarially changing zero-sum games." *International Conference on Machine Learning (ICML)*.

## Research Grants

---

- **National Science Foundation.** "Data-Driven Optimal Police Patrol Zone Districting and Staffing." Role: PI. Co-PI: Yao Xie, George Nemhauser. \$564,547. (10/2020-09/2023)
- **Americold.** "Data-Driven Capacity Monitoring, Prediction and Planning for Hyperconnected Cold Chain Facilities." Role: co-PI. PI: Benoit Montreuil. \$300,000. (01/2020-04/2021)
- **Dillard's Inc.** "Dynamic Inventory Allocation in a Fashion Retail Network." Role: PI. Co-PI: Alejandro Toriello. \$100,000. (08/2019-05/2020)
- **SF Express.** "Data-driven Design and Operation of Hyperconnected Inter-city Logistics." Role: co-PI. PI: Benoit Montreuil, co-PIs: Alan Erera, Martin Savelsbergh, Alejandro Toriello. \$1,076,689. (08/2018-07/2021)
- **Oracle.** "Online Demand Learning and Prize Optimization with Endogeneity Effect." Role: co-PI. PI: David Simchi-Levi. \$100,000. (05/2018-04/2019)

## Students Advised

---

### PhD Students

- **Adrian Rivera Cardoso:** Graduated in December 2019 (co-advised with Huan Xu). Current position: Machine Learning Scientist at LinkedIn.
- **Yufeng Cao:** Graduated in July 2020 (co-advised with Anton Kleywegt). Current position: Assistant Professor, Antai School of Management, Shanghai Jiao Tong University.
- **Pornpawee Bumpensanti:** Advised since Spring 2017. Expected graduate date: December 2020.
- **Sung Woo Kim:** Advised since Fall 2018. Expected graduate date: June 2022.

### MS Students

- **Felipe Simon:** MS in Operations Research. Advised since Fall 2019. Expected graduate date: December 2020.
- **Rafael J. Hanashiro:** MS in Computer Science. Advised since Summer 2019. Expected graduate date: December 2020.

## Service on Thesis or Dissertation Committees

- **Robert R Bishop:** Graduate in October 2019 (advised by Chip White).
- **Yasaman Mohammadshahi:** Graduated in August 2020 (Advised by Pinar Keskinocak, Beril Toktay).
- **Zhaowei She:** (advised by Turgay Ayer).
- **Hongzhang Shao:** (advised by Anton Kleywegt).
- **Shixiang Zhu:** (advised by Yao Xie).
- **Isabella Sanders:** (advised by Benoit Montreuil).

## Teaching Experience

---

### Georgia Institute of Technology

- Supply Chain Economics (ISYE 4301), undergraduate course – Spring 2017 (rating: 4.5/5.0), Fall 2017 (rating: 4.3/5.0), Spring 2019 (2 sections, rating: 4.6/5.0, 4.7/5.0), Spring 2020 (2 sections, rating: N/A).
- Revenue Management (ISYE 8803), PhD course – Spring 2018 (rating: 5.0/5.0).
- Inventory Theory (ISYE 8813), PhD course – Fall 2019 (rating: 5.0/5.0).

## Other Work Experience

---

**Massachusetts Institute of Technology**, Cambridge, MA (Sep 2016 – Dec 2016)

*Postdoctoral Associate, Department of Civil and Environmental Engineering*

**IBM Research**, Yorktown Heights, NY (Jun 2013 – Aug 2013)

*Research Intern*

**China Petrochemical Corporation**, Guangdong, China (Jul 2010 – Aug 2010)

*Summer Intern*

## Invited Seminar Presentations

---

- |      |   |
|------|---|
| 2020 | London Business School, Management Science & Operations Group.<br>Duke University, Decision Sciences Group.<br>Shanghai Jiao Tong University, Antai College of Economics & Management.<br>Washington University in St. Louis, Olin Business School. |
| 2019 | Emory University, Information Systems & Operations Management Group.<br>University of Michigan, Industrial & Operations Engineering Department.<br>Georgia Tech, Scheller College of Business.  |
| 2018 | MIT, Institute for Data, Science, and Society.<br>Hong Kong University of Science and Technology Business School.   |
| 2017 | Tsinghua University, Department of Industrial Engineering.<br>Georgia Tech, Supply Chain Logistics Institute.   |

- New York University (Shanghai).
- 2016 UC Berkeley, Industrial Engineering and Operations Research.  
UIUC, Industrial and Enterprise Systems Engineering.  
University of Michigan, Ross School of Business.  
Carnegie Mellon University, Tepper School of Business.
- 2015 University of North Carolina, Kenan-Flagler Business School.  
Georgia Tech, School of Industrial and Systems Engineering.  
MIT, Sloan School of Management, Operations Management Seminar.

## Conference & Workshop Presentations

---

- INFORMS Annual Meeting, 2012-2019.
- MSOM Annual Conference, 2017-2019, 2015, 2014.
- MSOM Supply Chain SIG Conference, 2015.
- INFORMS Revenue Management & Pricing Conference, 2019, 2016, 2015.
- INFORMS Applied Probability Society (APS) Conference, 2019, 2017.
- INFORMS Optimization Society Conference, 2016.
- POMS Annual Conference, 2016, 2015.
- Supply Chain Optimization Faculty Summit, Amazon (Seattle, WA), 2017.
- University of Bergamo/Georgia Tech Optimization Workshop, (Bergamo, Italy), 2017.
- Machine Learning @ GT Launch Event, Georgia Tech, 2017.
- Workshop on Data-driven Research in Operations Innovation, Fudan University (Shanghai, China), 2017.
- Consortium for Operational Excellence in Retailing (COER), Harvard Business School, 2019.

## Professional Service

---

- Journal Referee for *Mathematics of Operations Research*, *Operations Research*, *Management Science*, *European Journal of Operational Research*, *Production and Operations Management*, *IIE Transactions*, *Manufacturing & Service Operations Management*, *MIS Quarterly*, *INFORMS Journal on Optimization*, *Transportation Science*, *Naval Research Logistics*.
- Conference Reviewer for *COLT*, *NeurIPS*, *ICLR*, *INFORMS RMP*, *MSOM SIG*.
- Grant Reviewer/Panelist for *NSF*, *NSERC*.
- INFORMS Junior Faculty Interest Group (JFIG), Vice President/President-Elect (2019-2020); President (2020-2021)
- Program Committee, INFORMS Revenue Management & Pricing Conference 2017
- Session Chair for INFORMS 2015, 2016, 2018, 2019

- Coordinator for Georgia Tech ISyE seminar series, 2017-2018
- Reviewer for MS Analytics Admission, Georgia Tech, 2017
- ISyE Ph.D. Admission Committee, Georgia Tech, 2017-2020
- Coordinator for MIT Data Science Lab (DSL) seminar series, 2015-2016
- Chair of PhD IE Supply Chain Comprehensive Exam Committee, 2020