Weiwei Chen

Rutgers, The State University of New Jersey
Rutgers Business School – Newark and New Brunswick
Department of Supply Chain Management
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EDUCATION

Ph.D., Industrial Engineering, University of Wisconsin–Madison, July 2010

M.S., Industrial Engineering, University of Wisconsin–Madison, December 2007

M.S., Control Science and Engineering, Tsinghua University, July 2006

B.S., Automation, Tsinghua University, July 2003

PROFESSIONAL EXPERIENCE

Rutgers University, Department of Supply Chain Management

Associate Professor, July 2018 – Present

Director of Master of Supply Chain Analytics, 2017 – Present

Assistant Professor, January 2014 – June 2018

General Electric Global Research, Management Sciences Lab

Scientist, July 2010 – December 2013

- In energy and smart grid areas (serving GE Energy and external electric utility companies): advanced the technology of demand-side management; contributed to the successful development and deployment of GE's Demand Response Management System.
- In air traffic management area (serving GE Aviation and Lockheed Martin): contributed to the technology advancements of conflict-free trajectory negotiation between aircrafts and ground controllers.
- In airline scheduling area (serving GE Aviation): developed airline flight and passenger disruption recovery optimization algorithms considering aircraft preventive maintenance.

RESEARCH INTERESTS

Data analytics in service operations

Operations and finance interface

Optimization in the supply chain, logistics, and manufacturing systems

Methodologies in simulation and global optimization

TEACHING EXPERIENCE

Rutgers University

MBA/MS core course: 22:799:580/586, Operations Analysis (average instructor effectiveness 4.67/5; average course quality 4.63/5)

Ph.D./Masters course: 26:799:685, Fundamentals of Optimization for Supply Chain Management (average instructor effectiveness 4.83/5; average course quality 4.84/5)

Undergraduate course: 29/33:799:460, Introduction to Six Sigma and Lean Manufacturing (average instructor effectiveness 4.48/5; average course quality 4.44/5)

Undergraduate course: 29/33:799:320, Fundamentals of Supply Chain Solutions with SAP (average instructor effectiveness 4.34/5; average course quality 4.24/5)

University of Wisconsin-Madison

Instructor (Spring 2009): ISyE 620, Simulation Modeling and Analysis (nominated for teaching award)

PUBLICATIONS

($\star$: corresponding author)

Refereed Journals

1. W. Chen*, S. Gao, W. Chen and J. Du (2022) Optimizing Resource Allocation in Service Systems via Simulation: A Bayesian Formulation. *Production and Operations Management*, forthcoming.

2. J. Tao, H. Dai, W. Chen and H. Jiang (2022) The Value of Personalized Dispatch in O2O On-Demand Delivery Services. *European Journal of Operational Research*, forthcoming.

3. T. Wu, C. Zhang, W. Chen, Z. Liang and X. Zhang (2022) Unsupervised Learning-Driven Matheuristic for Production-Distribution Problems. *Transportation Science*, forthcoming.

4. J. Liu, W. Chen, J. Yang, H. Xiong, C. Chen (2022) Iterative Prediction-and-Optimization for E-logistics Distribution Network Design. *INFORMS Journal on Computing*, 34(2): 769–789.

5. M. Qin, Z. Shi, W. Chen, S. Gao, L. Shi (2021) Wafer Defect Inspection Optimization with Partial Coverage–A Numerical Approach. *IEEE Transactions on Automation Science and Engineering*, 18(4): 1916–1927.

6. J. Tao, H. Dai, H. Jiang, W. Chen (2021) Dispatch Optimization in O2O On-Demand Service with Crowd-Sourced and In-House Drivers. *International Journal of Production Research*, 59(20): 6054–6068.
   – Received the third prize paper award at the 19th Annual Meeting of the China Society of Logistics

7. D. Ivanov, B. Sokolov, W. Chen*, A. Dolgui, F. Werner, S. Potrysaev (2021) A Control Approach to Scheduling Flexibly Configurable Jobs with Dynamic Structural-Logical Constraints. *IISE Transactions*, 53(1): 21–38.
   – Received the *IISE Transactions* 2022 Design & Manufacturing Best Paper Award

8. C. Zhang, H. Guan, Y. Yuan, W. Chen, T. Wu (2020) Machine Learning-Driven Algorithms for the Container Relocation Problem. *Transportation Research Part B: Methodological*, 139: 102–131.

9. Y. Zhang, X. Yang, W. Zhang, W. Chen (2020) Online Ordering Rules for the Multi-Period Newsvendor Problem with Quantity Discounts. *Annals of Operations Research*, 288(1): 495–524.

10. Z. Shi, S. Gao, H. Xiao, W. Chen (2019) A Worst-Case Formulation for Constrained Ranking and Selection with Input Uncertainty. *Naval Research Logistics*, 66(8): 648–662.

11. W. Chen⋆, L. Lei, Z. Wang, M. Teng, J. Liu (2018) Coordinating Supplier Selection and Project Scheduling in Resource-Constrained Construction Supply Chains. *International Journal of Production Research*, 56(19): 6512–6526.

12. R. Ke, D. Patton, W. Chen (2018) Business Models Dynamics and Business Ecosystems in the Emerging 3D Printing Industry. *Technological Forecasting and Social Change*, 134: 234–245.

13. J. M. Song, W. Chen⋆, L. Lei (2018) Supply Chain Flexibility and Operations Optimisation Under Demand Uncertainty: A Case in Disaster Relief. *International Journal of Production Research*, 56(10): 3699–3713.

14. W. Chen⋆, A. Baveja, B. Melamed (2018) Temporal Shaping of Simulated Time Series with Cyclical Sample Paths. *Probability in the Engineering and Informational Sciences*, 32(1): 126–143.

15. W. Chen⋆, B. Melamed, O. Sokolinskiy, B. Sopranzetti (2017) Cash Conversion Systems in Corporate Subsidiaries. *Manufacturing & Service Operations Management*, 19(4): 604–619.

16. S. Gao, W. Chen, L. Shi (2017) A New Budget Allocation Framework for the Expected Opportunity Cost. *Operations Research*, 65(3): 787–803.

17. R. Tyagi, W. Chen⋆, J. Black, P. Tiwari, B. Lecours, J. Shaver (2017) Transforming Electrical Load from an Operational Constraint to a Controllable Resource. *Interfaces*, 47(4): 292–304.

18. S. Gao, H. Xiao, E. Zhou, W. Chen (2017) Robust Ranking and Selection with Optimal Computing Budget Allocation. *Automatica*, 81: 30–36.

19. W. Chen⋆ (2017) Sensitivity-based Nested Partitions for Solving Markov Decision Processes. *Operations Research Letters*, 45(5): 481–487.

20. S. Gao, W. Chen (2017) A Partition-based Random Search for Stochastic Constrained Optimization via Simulation. *IEEE Transactions on Automatic Control*, 62(2): 740–752.

21. S. Gao, W. Chen (2017) Efficient Feasibility Determination with Multiple Performance Measure Constraints. *IEEE Transactions on Automatic Control*, 62(1): 113–122.

22. B. Melamed, R. Leuschner, W. Chen, D. Rogers, M. Cao (2016) Inventory Turns and Finite-Horizon Little's Law. *Annals of Operations Research*, 1–18 (DOI: 10.1007/s10479-016-2157-9).

23. Y. Zhang, W. Chen⋆, R. Xu, J. Black (2016) A Cluster-based Method for Calculating Baselines for Residential Loads. *IEEE Transactions on Smart Grid*, 7(5): 2368–2377.

24. S. Gao, W. Chen (2016) A New Budget Allocation Framework for Selecting Top Simulated Designs. *IIE Transactions*, 48(9): 855–863.

25. S. Gao, W. Chen (2015) Efficient Subset Selection for the Expected Opportunity Cost. *Automatica*, 59: 19–26.

26. W. Chen⋆, S. Gao, C.-H. Chen, L. Shi (2014) An Optimal Sample Allocation Strategy for Partition-based Random Search. *IEEE Transactions on Automation Science and Engineering*, 11(1): 177–186.

27. W. Chen⋆, X. Wang, J. Petersen, R. Tyagi, J. Black (2013) Optimal Scheduling of Demand Response Events for Electric Utilities. *IEEE Transactions on Smart Grid*, 4(4): 2309–2319.

28. W. Chen⋆, J. Song, L. Shi, L. Pi, P. Sun (2013) Data Mining-based Dispatching System for Solving the Local Pickup and Delivery Problem. *Annals of Operations Research*, 203(1): 351–370.

29. H. Zhang, S. Gao, W. Chen, L. Shi, W. D'Souza, R. Meyer (2013) A Surrogate-based Metaheuristic Global Search Method for Beam Angle Selection in Radiation Treatment Planning. *Physics in Medicine and Biology*, 58(6): 1933–1946.

30. J. Song, W. Chen, L. Wang (2012) A Block Queueing Network Model for Control Patients Flow Congestion in Urban Healthcare System. *International Journal of Services Operations and Informatics*, 7(2–3): 82–95.

31. C. Zhang, W. Chen (2012) A Note on 'A New Dynamic Programming Formulation of ($n \times m$) Flowshop Sequencing Problems with Due Dates'. *International Journal of Production Research*, 50(16): 4631–4634.

32. W. Chen⋆, L. Pi, L. Shi (2011) An Enhanced Nested Partitions Algorithm Using Solution Value Prediction. *IEEE Transactions on Automation Science and Engineering*, 8(2): 412–419.

33. C. Zhang, W. Chen, L. Shi, L. Zheng (2010) A Note on Deriving Decision Rules to Locate Export Containers in Container Yards. *European Journal of Operational Research*, 205(2): 483–485.

34. W. Chen⋆, R. Geng, D. Cui (2006) Optimization of Sequencing and Scheduling for Arrival Aircrafts in Approach Area. *Journal of Tsinghua University (Science & Technology)*, 46(1): 157–160 (in Chinese).

Book Chapters

1. W. Chen⋆, B. Melamed, O. Sokolinskiy, B. Sopranzetti (2020) Equilibrium Rate Analysis of Cash Conversion Systems: The Case of Corporate Subsidiaries. A chapter in *Handbook of Financial Econometrics, Mathematics, Statistics, and Machine Learning*, C.F. Lee, J. C. Lee (eds.), World Scientific, 1725–1762.

2. W. Chen⋆, L. Shi (2015) Nested Partitions for Large-Scale Optimization in Supply Chain Management. A chapter in *Supply Chain Management and Logistics: Innovative Strategies and Practical Solutions*, Z. Liang, W. Chaovalitwongse and L. Shi (eds.), CRC Press, 123–150.

3. W. Chen⋆, L. Shi (2013) Nested Partitions. A chapter in *Stochastic Simulation Optimization for Discrete Event Systems - Perturbation Analysis, Ordinal Optimization, and Beyond*, C.-H. Chen, Q.-S. Jia, L. H. Lee (eds.), World Scientific Publishing Co., 203–226.

4. W. Chen⋆, L. Pi, L. Shi (2009) Nested Partitions and Its Applications to the Intermodal Hub Location Problem. A chapter in *Optimization and Logistics Challenges in the Enterprise*, W. Chaovalitwongse, K. Furman and P. Pardalos (eds.), Springer, 229–251.

Conference Proceedings

1. H. Dai, J. Tao, H. Jiang, W. Chen (2019) O2O On-Demand Delivery Optimization with Mixed Driver Forces. In *Proceedings of the 9th IFAC Conference on Manufacturing Modelling, Management and Control (MIM 2019)*, pp. 391–396.

   – Received the Best Paper Award at the conference (out of 774 submitted full papers)

2. W. Chen⋆, B. Melamed, M. Teng, C. Canaday (2017) Modeling and Simulation of Port-of-Entry Systems. In *Proceedings of the 2017 Winter Simulation Conference*, pp. 4470–4472 (extended abstract).

3. S. Gao, H. Xiao, E. Zhou, W. Chen (2016) Optimal Computing Budget Allocation with Input Uncertainty. In *Proceedings of the 2016 Winter Simulation Conference*, pp. 839–846.

4. J. Liu, L. Sun, W. Chen, H. Xiong (2016) Rebalancing Bike Sharing Systems: A Multi-Source Data Smart Optimization. In *Proceedings of the 22nd ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, pp. 1005–1014.

5. S. Gao, W. Chen (2016) Feasibility Determination in Presence of Multiple Performance Measure Constraints. In *Proceedings of the 2016 IEEE International Conference on Industrial Technology*, pp. 988–992.

6. S. Gao, W. Chen (2015) A Note on the Subset Selection for Simulation Optimization. In *Proceedings of the 2015 Winter Simulation Conference*, pp. 3768–3776.

7. J. Liu, Q. Li, M. Qu, W. Chen, J. Yang, H. Zhong, X. Hui, Y. Fu (2015) Station Site Optimization in Bike Sharing Systems. In *Proceedings of the 2015 IEEE International Conference on Data Mining*, pp. 883–888.

8. W. Chen⋆, D. Dobrzykowski, L. Lei, Z. Jian, H. Dong, M. Cohen (2014) Neonatal ICU Operational Analysis via Simulation. In *Proceedings of the 2014 Winter Simulation Conference*, pp. 4164–4165 (extended abstract).

9. W. Chen⋆, J. Song, L. Shi (2011) Optimizing Local Pickup and Delivery with Uncertain Loads. In *Proceedings of the 2011 Winter Simulation Conference*, pp. 4251–4261.

10. Y. Zhang, W. Chen, J. Black (2011) Anomaly Detection in Premise Energy Consumption Data. In *Proceedings of the 2011 IEEE Power and Energy Society General Meeting*, pp. 1–8.

11. W. Chen, H. Zhang, R. Meyer, L. Shi, W. D'Souza (2010) Beam Angle Selection (BAS) via Nested Partitions-based Global Search Using a Fast Beam Set Scoring Process. In *Proceedings of the American Society for Radiation Oncology 52nd Annual Meeting, International Journal of Radiation Oncology ● Biology ● Physics*, 78 (3): S811–S812 (extended abstract).

12. W. Chen⋆, L. Shi (2008) A Variant of Examination Timetabling Problem. In *Proceedings of the 2008 IEEE Conference on Automation Science and Engineering*, pp. 353–358.

13. W. Chen⋆, D. Cui (2005) Optimization Model and Genetic Algorithm for Aircraft Scheduling Problem. In *Proceedings of the 2005 International Conference on Intelligent Systems*, pp. 1–5.

PATENTS

1. System and Method for Managing Aircraft Ground Operations, issued in 2015. U.S. Patent No. 9,218,744 (with J. Petersen and S. Bollapragada).

2. System and Method for Determining Aircraft Payloads to Enhance Profitability, issued in 2015. U.S. Patent No. 9,165,471 (with S. Bollapragada and J. Petersen).

3. System, Method, and Apparatus for Scheduling Aircraft Maintenance Events, issued in 2015. U.S. Patent No. 9,008,892 (with S. Bollapragada, J. Petersen and M. Harrington).

4. Methods and Systems for Managing Air Traffic, issued in 2015. U.S. Patent No. 8,942,914 (with R. Subbu et al.).

5. Systems and Methods for Data Anomaly Detection, issued in 2014. U.S. Patent No. 8,781,767 (with J. Black, B. Hoogs, M. Li and Y. Zhang).

6. Methods and Systems for Managing Air Traffic, issued in 2013. U.S. Patent No. 8,606,491 (with R. Subbu, et al.).

EDITED PROCEEDINGS

1. *AI and Analytics for Smart Cities and Service Systems: Proceedings of the 2021 INFORMS International Conference on Service Science*, R. Qiu, K. Lyons, W. Chen (eds.), Springer, 2021.

2. *AI and Analytics for Public Health: Proceedings of the 2020 INFORMS International Conference on Service Science*, H. Yang, R. Qiu, W. Chen (eds.), Springer, 2020.

3. *Smart Service Systems, Operations Management, and Analytics: Proceedings of the 2019 INFORMS International Conference on Service Science*, H. Yang, R. Qiu, W. Chen (eds.), Springer, 2019.

RESEARCH GRANTS

External Grants

U.S. Department of Homeland Security, "Detecting Criminal Disruption of Supply Chains Study" (Co-PI, with F. Roberts, B. Melamed, et al.), $470,566 for the period from 9/20/2021 to 9/19/2023.

U.S. Department of Homeland Security, "Modeling Methodology and Simulation of Port-of-Entry Systems" (Co-PI, with B. Melamed), $684,587 for the period from 1/16/2016 to 6/30/2018.

Internal Grants

Rutgers Business School, Dean's Fund for Summer Ph.D. Research Assistantship, 2015 (J. M. Song), 2016 (H. Zhang), 2020 (G. Kumcu), 2021 (G. Kumcu), 2022 (X. Huang, C. Zhou, and A. Goswami).

Rutgers University, Grant Awards in Big Data Analytics, "Crowd-Centric Security Big Data Analytics and Risk Management: An Interdisciplinary Academic-Industry Consortium" (Co-PI, with X. Liu, M. Kapadia and B. Piccoli), $40,000 for the period 7/2017 to 6/2018.

Rutgers University, Open & Affordable Textbook Grant, $1,000 for Fall 2017 and Spring 2018 semesters.

Rutgers University – Newark, Chancellor's Strategic Seed Grant, "Telemedicine Delivery for Underserved Populations in Greater Newark" (Co-PI, with B. Melamed et al.), $50,000 for the period 7/2015 to 6/2017.

HONORS AND AWARDS

IISE Transactions 2022 Design & Manufacturing Best Paper Award, 2022.

Third Prize Paper Award, 19th Annual Meeting of the China Society of Logistics, 2020.

Best Paper Award, 9th IFAC Conference on Manufacturing Modeling, Management, and Control (MIM), 2019.

Dean's Meritorious Teaching Award, Rutgers Business School, 2019.

Junior Faculty Research Excellence Award, Rutgers Business School, 2017.

Outstanding Reviewer, *IEEE Transactions on Automatic Control*, 2011, 2013, 2016.

GE Above & Beyond Bronze Award for Expertise, GE Global Research, 2013.

GE Above & Beyond Patent Award, GE Global Research, 2011, 2012, 2013.

GE's Genius of the Day, GE Global Research, 2011.

GE Above & Beyond Silver Award for Expertise, GE Global Research, 2011.

GE Above & Beyond Bronze Award for Inclusiveness, GE Global Research, 2011.

GE Level 3 Award, GE Global Research, 2010.

Richard S. and Harriet K. Fein Scholarship, University of Wisconsin-Madison, 2008.

PRESENTATIONS

Invited University/Industry Talks

1. Exploring the Power of Machine Learning in Solving Hard Optimization Problems in Supply Chains, *GE Global Research*, Niskayuna, NY, July 2021.

2. Improving Supply Chain Operations and Driving Business Insights Using Analytics, *Symbiosis Institute of Operations Management*, Nashik, India, November 2020.

3. Quantifying Financial Impacts of Blockchain in Corporate Subsidiaries, *Southwestern University of Finance and Economics*, Chengdu, China, July 2019.

4. Tackling Stochastic Constrained Problems via Simulation: Feasibility Determination and Optimization, *Rutgers University, Department of Industrial and Systems Engineering*, Piscataway, NJ, October 2018.

5. Topics in Supply Chain Analytics, *Tsinghua University, Institute of Economics*, Beijing, China, July 2018.

6. Topics in Supply Chain Financial Management, *Northeast Normal University, School of Business*, Changchun, China, July 2018.

7. Optimizing Supply Chain Decisions Using Data Analytics and Simulation, *JD.com*, Beijing, China, June 2018.

8. Cash Conversion Systems in Corporate Subsidiaries, *George Washington University, Department of Decision Sciences*, Washington, D.C., March 2018.

9. Cash Conversion Systems in Corporate Subsidiaries, *University of Wisconsin-Madison, Department of Industrial and Systems Engineering*, Madison, WI, November 2017.

10. Tackling Stochastic Constrained Problems via Simulation: Feasibility Determination and Optimization, *New Jersey Institute of Technology, Laboratory for Discrete Event Systems*, Newark, NJ, September 2017.

11. Rebalancing Bike Sharing Systems, *Xiamen University, School of Information Science and Engineering*, Xiamen, China, August 2017.

12. Equilibrium Rate Analysis of Cash Conversion Systems in Corporate Subsidiaries, *Xiamen University, School of Management*, Xiamen, China, August 2017.

13. Equilibrium Rate Analysis of Cash Conversion Systems in Corporate Subsidiaries, *Tsinghua University, Graduate School at Shenzhen*, Shenzhen, China, July 2017.

14. Data Analytics and Optimization for Smarter Decision Makings in Electrical Grid, *Tsinghua University, Department of Industrial Engineering*, Beijing, China, July 2015.

15. Industrial Internet: Making Better Decisions in Electrical Grid and Beyond, *Peking University, Department of Industrial Engineering and Management*, Beijing, China, June 2014.

16. Smart Grid - Grid IQ™ Demand Optimization Solution, *MIT Engineering Systems Division*, Cambridge, MA, November 2011.

17. Evaluating the Impact of Local Dray Driver Domiciles on Dispatch Performance, *Schneider National*, Green Bay, WI, June 2007.

Conference Keynote/Plenary Talks

1. Educating the Current & Future Supply Chain Leaders, *Digital Supply Chain Summit*, Online, October 2021.

2. Improving Service Designs and Operations Using Analytics, *2020 INFORMS Conference on Service Science*, Online, December 2020.

3. Addressing the Skills Gap for Digital Supply Chain Transformation: A Vision for Talent Strategy for Digital Age, *Digital Supply Chain Summit*, Princeton, NJ, June 2019.

Conference Presentations

1. A Markov Renewal Model and Approximations for Valuating Cash Conversion Systems, *The 29th Annual Pacific Basin Finance, Economics, Accounting and Management (PBFEAM) Conference*, Online, September 2021.

2. O2O On-Demand Delivery Optimization with Mixed Driver Forces, *2019 MIM Conference*, Berlin, Germany, August 2019 (invited talk).

3. Supply Chain Analytics Curriculum/Course Design, *POMS Annual Conference*, Washington D.C., May 2019 (invited panel discussion).

4. Quantifying Financial Impacts of Blockchain in Cash Conversion Systems, *POMS Annual Conference*, Washington D.C., May 2019 (invited talk).

5. Rebalancing Bike Sharing Systems: A Data-Driven Approach, *2018 INFORMS Annual Meeting*, Phoenix, AZ, November 2018 (invited talk).

6. Coordinating Supplier Selection and Project Scheduling in Construction Supply Chains, *2018 INFORMS International Conference*, Taipei, Taiwan, June 2018 (invited talk).

7. Modeling and Simulation of Port-of-Entry Systems, *Winter Simulation Conference*, Las Vegas, NV, December 2017 (contributed talk).

8. Cash Conversion Systems in Corporate Subsidiaries, *INFORMS Annual Meeting*, Houston, TX, October 2017 (invited talk).

9. Temporal Shaping of Simulated Time Series with Cyclical Sample Paths, *IEEE International Conference on Automation Science and Engineering, Workshop on Data Analytical Approach for Large-Scale Optimization*, Xi'an, China, August 2017 (invited talk).

10. Inventory Turns and Finite-Horizon Little's Laws, *The 10th International Annual Conference of the Chinese Scholars Association for Management Science and Engineering (CSAMSE)*, Guangzhou, China, July 2017 (invited talk).

11. Inventory Turns and Finite-Horizon Little's Laws, *POMS Annual Conference*, Seattle, WA, May 2017 (invited talk).

12. A Partition-based Random Search for Stochastic Constrained Optimization via Simulation, *INFORMS Annual Meeting*, Nashville, TN, November 2016 (invited talk).

13. Optimizing Hospital Service Levels via Resource Allocation, *INFORMS Annual Meeting*, Nashville, TN, November 2016 (invited talk).

14. Temporal Shaping of Simulated Time Series with Cyclical Sample Paths, *The 8th International Workshop on Applied Probability (IWAP)*, Toronto, Canada, June 2016 (invited talk).

15. A Markovian Model of Cash Conversion Systems in Make-to-Stock Supply Chains, *POMS Annual Conference*, Orlando, FL, May 2016 (invited talk).

16. Data-Oriented Decision Making in Demand Response, *INFORMS Annual Meeting*, Philadelphia, PA, November 2015 (invited talk).

17. Optimizing Emergency Response Operations in Disaster Reliefs, *The 8th International Annual Conference of the Chinese Scholars Association for Management Science and Engineering (CSAMSE)*, Shenyang, China, July 2015 (invited talk).

18. An Adaptive Partitioning Algorithm for Sequential Decision Making in Supply Chain, *INFORMS Annual Meeting*, San Francisco, CA, November 2014 (invited talk).

19. Drayage Operations Optimization for Intermodal Transportation, *INFORMS Annual Meeting*, Minneapolis, MN, October 2013 (invited talk).

20. An Optimal Sample Allocation Strategy for Nested Partitions, *IEEE International Conference on Automation Science and Engineering, Workshop on Stochastic Simulation Optimization for Discrete Event Systems - Perturbation Analysis, Ordinal Optimization, and Beyond*, Madison, WI, August 2013 (invited talk).

21. An Optimal Sample Allocation Strategy for Partition-based Random Search, *INFORMS Annual Meeting*, Phoenix, AZ, October 2012 (contributed talk).

22. Optimizing the Scheduling of Demand Response Events for Electric Utilities, *INFORMS Annual Meeting*, Charlotte, NC, November 2011 (invited talk).

23. Optimizing Local Pickup and Delivery with Uncertain Loads, *Winter Simulation Conference*, Phoenix, AZ, December 2011 (contributed talk).

24. Sensitivity-based Nested Partitions for Solving Markov Decision Processes, *INFORMS Annual Meeting*, Austin, TX, November 2010 (contributed talk).

25. Radiation Treatment Planning: Beam Angle Selection, *INFORMS Annual Meeting*, Austin, TX, November 2010 (contributed talk).

26. Nested Partitions with Statistical Promising Indices, *INFORMS Annual Meeting*, San Diego, CA, October 2009 (invited talk).

27. Local Pickup and Delivery Problem with Stochastic Loads, *INFORMS Annual Meeting*, San Diego, CA, October 2009 (contributed talk).

28. Policy Partitioning Dynamic Programming, *INFORMS Annual Meeting*, Washington DC, October 2008 (contributed talk).

29. Data Mining-based Decision System Framework for Local Pickup and Delivery Problem, *INFORMS Annual Meeting*, Seattle, WA, November 2007 (invited talk).

PROFESSIONAL ACTIVITIES

Editorial Service

Associate Editor, *IEEE Transactions on Automation Science and Engineering*, 2022–2024

Associate Editor, *INFORMS Journal on Applied Analytics* (formerly *Interfaces*), since 2021

Associate Editor, *Journal of Simulation*, since 2016

Associate Editor, *Rutgers Business Review*, since 2016

Associate Editor, *Digital Transformation and Society*, since 2022

Guest Editor, *Annals of Operations Research*, Special Issue on "Digital Manufacturing and Supply Chain: Creating Benefits Through Operations Research and Artificial Intelligence" (targeted 2023)

Guest Editor, *IISE Transactions*, Special Issue on "Modeling and Optimization of Supply Chain Resilience to Disruptions Triggered by Pandemics and Long-Term Crises" (targeted December 2022)

Guest Editor, *International Journal of Production Research*, Special Issue on "Reconfigurable Supply Chain Networks: Digital Platforms, Epidemics/Pandemics, and Climate Change" (targeted November 2022), and Special Issue on "Design and Management of Energy-Efficient and Energy-Resilient Supply Chains" (targeted November 2023)

Guest Editor, *Flexible Services and Manufacturing Journal*, Special Issue on "Modeling and Data Analytics in Manufacturing and Supply Chain Operations" (Volume 34, Issue 2, June 2022)

Guest Editor, *Financial Innovation*, Special Issue on "Impact of COVID-19 and Cryptocurrencies on the Global Financial Market" (Volume 7, 2021)

Editorial Board Member, *Journal of Digital Economy*, since 2022

Editorial Board Member, *Methodology and Computing in Applied Probability*, 2019–2021

Editorial Board Member, *Frontiers of Engineering Management*, since 2018

Society Service

Chair, INFORMS Service Science Section, August 2020 – December 2023

Technical Committee Member of Manufacturing Modeling for Management and Control, International Federation of Automatic Control (IFAC), since 2017

Winter Simulation Conference Ph.D. Colloquium Committee, 2017–2020 (Committee Chair in 2019)

Conference Service

Track chair, 2022 Winter Simulation Conference, Singapore, December 2022

Session chair, 2022 CSAMSE Annual Conference, Online, July 2022

Program committee member, 10th IFAC Conference on Manufacturing Modeling, Management, and Control (MIM 2022), Nantes, France, June 2022

Conference general chair, 2022 INFORMS Conference on Service Science, Shenzhen, China, July 2022

Cluster chair and the Service Science Best Cluster Paper Award committee chair, 2021 INFORMS Annual Meeting, Anaheim, CA, October 2021

Conference program chair, 2021 INFORMS Conference on Service Science, Online, August 2021

Conference program chair, 2020 INFORMS Conference on Service Science, Online, December 2020

Cluster chair, 2020 INFORMS Annual Meeting, Online, November 2020

Track coordinator, colloquium chair and session chair, 2019 Winter Simulation Conference, National Harbor, MD, December 2019

Session chair and the Best Student Paper Award committee member, 9th IFAC Conference on Manufacturing Modeling, Management, and Control (MIM 2019), Berlin, Germany, August 2019

Conference program chair, 2019 INFORMS Conference on Service Science, Nanjing, China, June 2019

Technical program committee, 2018 Winter Simulation Conference, Sweden, December 2018

Session chair and the Service Science Best Cluster Paper Award committee member, 2018 INFORMS Annual Meeting, Phoenix, AZ, November 2018

Conference program chair, 2018 INFORMS Conference on Service Science, Phoenix, AZ, November 2018

Session chair, 2018 INFORMS International Conference, Taipei, Taiwan, June 2018

Technical program committee, 2017 Winter Simulation Conference, Las Vegas, NV, December 2017

Co-organizer, Workshop on Data Analytical Approach for Large-Scale Optimization, 2017 IEEE International Conference on Automation Science and Engineering, Xi'an, China, August 2017

Session chair, The 10th CSAMSE Annual Conference, Guangzhou, China, July 2017

Technical program committee, 2016 Winter Simulation Conference, Washington, D.C., December 2016

Session chair, 2016 INFORMS Annual Meeting, Nashville, TN, November 2016

Scientific program committee and session chair, 8th International Workshop on Applied Probability (IWAP), Toronto, Canada, June 2016

Session chair, 8th CSAMSE Annual Conference, Shenyang, China, July 2015

Program committee, 23rd IASTED International Conference on Modelling and Simulation, Banff, Canada, July 2012

Session chair, 2011 INFORMS Annual Meeting, Charlotte, NC, November 2011

Session chair, 2011 INFORMS Northeast Regional Conference, Amherst, MA, May 2011

Session chair, 2009 INFORMS Annual Meeting, San Diego, CA, October 2009

Journal Reviewer

Operations Research; *INFORMS Journal on Computing*; *Production and Operations Management*; *INFORMS Journal on Applied Analytics* (formerly *Interfaces*); *Service Science*; *IISE Transactions*; *Naval Research Logistics*; *Transportation Research Part B: Methodological*, *Automatica*; *IEEE Transactions on Automatic Control*; *IEEE Transactions on Automation Science and Engineering*; *International Journal of Production Research*; *Annals of Operations Research*; *Omega*; etc.

Memberships

Institute for Operations Research and the Management Science (INFORMS), member since 2007

Production and Operations Management Society (POMS), member since 2016

Institute of Electrical and Electronics Engineers (IEEE), member since 2008 & senior member since 2016

UNIVERSITY SERVICE

Student Advisory

Ph.D. Student Advisor

- Gul Culhan Kumcu (co-advised with Dr. Mark Rodgers), 2019–present
- Zhe Jian (co-advised with Dr. Lei Lei), graduated in 2017
- Zhengwei Wang (co-advised with Dr. Lei Lei), graduated in 2016

School Service

Member, Special Programs Policy Committee, Rutgers Business School, 2021–2023

Member, Ad Hoc Committee on Faculty Professional Conduct, Rutgers Business School, 2019

Member, Nominating/Rules of Procedure Committee, Rutgers Business School, 2019

Member, Research Resources Committee, Rutgers Business School, 2018–2020

Member, New Brunswick Undergraduate Policy Committee, Rutgers Business School, 2016

Faculty Mentor, School of Arts and Sciences Honors Program (SASHP), Rutgers University–New Brunswick, 2015–2017

Founding Advisor, American Society for Quality Rutgers University–New Brunswick student branch (RU-ASQ), 2014–2016

Department Service

SCM NTT Reappointment Evaluation Committee, 2020–2021

SCM Seminar Series Coordinator, 2016–2017

SCM Newark Undergraduate Program Academic Coordinator, 2016–2017

Advisor of the Rutgers undergraduate team and the MBA team in the Rutgers Ten Plus Supply Chain Case Dual Challenge, New Brunswick, NJ, March 2015 (The undergraduate team won the first place in the competition.)

Co-Advisor of the Rutgers MBA team in the Sam M. Walton College of Business International Graduate Logistics Case Competition, Fayetteville, AR, March 2015 (Team won the third place in the competition.)

SCM Ph.D. Qualifying Examination Committee, since 2014

SCM Ph.D. Admission Committee, since 2014