

Bo WEI

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AREAS OF INTEREST

- Stochastic Analysis, Optimal Control, Robust Control
- Constrained Convex Optimization, Online Optimization
- Inventory Control, Supply Chain Management, Service Systems

WORKING EXPERIENCE

- Jan 2024- Present, Faculty of Business, Assistant Professor at Ozyegin University
- Sep 2021- Sep 2023, Faculty of Business Administration, Visiting Assistant Professor at Bilkent University
- Nov 2020-May 2021, Engineering Systems and Design, Research Fellow at Singapore University of Technology and Design
- Feb 2015-Aug 2020, Global Asia Institute, Industrial Systems Engineering and Management, Institute of Operations Research and Analytics, Research Fellow at National University of Singapore

EDUCATION

- Ph.D in Industrial and Systems Engineering (Dec 2014)
Texas A & M University, College Station
Advisors: Sila Çetinkaya and Daren B.H. Cline
Dissertation: Stochastic Clearing Models with Applications in Shipment Consolidation
- Master in Control Theory and Engineering (2008)
Dept. of Automation, **University of Science and Technology of China**
Advisor: Haibo Ji
Thesis: Robust Control in Stochastic Nonlinear Systems based on Dissipativity
- Bachelor's Degree in Automation (2005)
Dept. of Automation, **University of Science and Technology of China**

REFERRED PAPERS

Published:

1. Wei, B., Çetinkaya, S., Cline, D.B.H., Cost- and Service-based Comparison of Practical Policies for Stochastic Clearing under Nonlinear Delay Penalty, *IIE Transactions*, 2025. <https://doi.org/10.1080/24725854.2025.2568452>.
2. Wei, B., Çetinkaya, S., Cline, D.B.H., Inbound Replenishment and Outbound Dispatch Decisions under Hybrid Shipment Consolidation Policies: An Analytical Model and Comparison. *Transportation Research Part E*, 175, 103-135, 2023.
3. Wei, B., Çetinkaya, S., Cline, D.B.H., Analytical Results on the Service Performance of Stochastic Clearing Systems, *Probability in the Engineering and Informational Sciences*, 36, 217-236, 2022.
4. Wei, B., Yao D., Ergodic Inventory Control with Diffusion Demand and General Ordering Costs, *Operations Research Letters*, 49, 578-585, 2021.
5. Wei, B., Haskell, B.W., Zhao, S., The CoMirror Algorithm with Random Constraint Sampling for Convex Semi-Infinite Programming, *Annals of Operations Research*, 295: 809-841, 2020.
6. Wei B., Haskell, B.W., Zhao, S., An Inexact Primal-Dual Algorithm for Semi-Infinite Programming, *Mathematical Methods of Operations Research*, 91(3):501-544, 2020.

7. Çetinkaya, S., Mutlu, F., Wei, B., On the Service Performance of Alternative Shipment Consolidation Policies, *Operations Research Letters*, 42(1), 41-47, 2014.

Manuscripts to be Submitted:

1. Wei, B., Haskell, B.W., Zhao, S., A Randomized Nonlinear Rescaling Method in Large-Scale Constrained Convex Optimization,

Under Progress:

- An Uncertainty Principle in Stochastic Clearing Systems.
- Dynamic Pricing in Shipment Consolidation Model with a Brownian Motion Demand Process.
- Joint Dynamic Pricing and Clearing Policy in Shipment Consolidation.
- A Linearly Decreasing Pricing Strategy in Shipment Consolidation.

**TEACHING
EXPERIENCE**

- Courses at Ozyegin: Business Decision Modeling, Service Operations Management, Operations Management
- Courses at Bilkent: Introduction to Management Science, Production Management
- Courses Served as an Instructor at TAMU: Engineering Economy (4 semesters)
- Courses Served as a Teaching Assistant at TAMU: Probability for Engineering Decisions, Applications of Random Processes, Linear Programming
- Courses Served as a Teaching Assistant at USTC: Algebra in Control Theory, Nonlinear Control Systems

PRESENTATIONS

- A Comparison of Static vs. Linearly-Decreasing Pricing for Shipment Consolidation, POMS International (June/2024, Istanbul)
- Visibility and Invisibility in Ticket Queue Systems, School of economics and management, Beihang University (Jan/2024, Beijing)
- Visibility and Invisibility in Ticket Queue Systems, School of statistics, University of international Business and economics (Jan/2024, Beijing)
- Stochastic clearing under multiple Brownian motion input processes, Department of Industrial Engineering, Koc University (May/2023, Istanbul)
- Stochastic clearing under multiple Brownian motion input processes, School of statistics and data science, Nankai University (Oct/2022, invited online talk).
- Elective Surgery Outsourcing: A Queueing Control Perspective, Bilkent University (Dec/2021, Ankara)
- Analytical results on the service performance of stochastic clearing systems, INFORMS Annual Meeting (Oct/2021, online).
- Linearly decreasing pricing in shipment consolidation, INFORMS Annual Meeting (Nov/2014, San Francisco, CA).
- On some new properties of truncated random variables with applications in shipment consolidation, INFORMS Annual Meeting (Oct/2013, Minneapolis, MN).
- A comparison of integrated inventory/outbound dispatch policies, INFORMS Annual Meeting (Oct/2012, Phoenix, AZ).
- Optimal policies for multi-item temporal shipment consolidation, IIE Annual Conference (May/2012, Orlando, FL).

- Shipment consolidation model with drifted Brownian motion demand, Research Seminar in TAMU INFORMS Student Chapter (Feb/2012, College Station, TX).
- Shipment consolidation when demand is a drifted Brownian motion, INFORMS Annual Meeting (Nov/2011, Charlotte, NC).
- Robust performance rule design for stochastic nonlinear systems with model uncertainty, The 26th Chinese Control Conference (July/2007, Zhangjiajie, China).

GRADUATE COURSEWORK

Master stage at USTC:

- Math: Real Analysis, Linear Functional Analysis, Matrix Analysis
- Probability: Stochastic Processes, Stochastic Analysis
- Control: Linear Systems, Nonlinear Control Systems, Optimal Control, Robust Control, Stochastic Estimation and Control

Ph.D stage at TAMU:

- Math: Real Analysis I, Real Analysis II, Partial Differential Equations
- Probability theory and Statistics: Probability Measure Theory, Stochastic Processes, Advanced Stochastic Processes (Martingale and Diffusion Theory), Queuing Theory, Stochastic Differential Equations, Statistical Inference
- Optimization: Linear Programming, Nonlinear Programming
- Economics: Microeconomics I, Microeconomics II (General Equilibrium, Game Theory, Principal-Agent)
- Supply Chain Management: Facility Location and Logistics, Production and Inventory Control, Quantitative Models for Supply Chain Coordination

ADDITIONAL INTEREST

- Financial Derivative Pricing, Portfolio Theory, Mean Field Game, Mechanism Design, Optimal Transport, Lower Bounds on the Oracle Complexity of Optimization, Output Regulation, Adaptive Control, Information Theory
- Philosophy, Religion, Diamond Sutra

HONORS AND AWARDS

- Hewlett-Packard Scholarship (2008)
- Samsung Scholarship (2007)
- First Prize, the Third National Graduate Mathematical Modeling Contest (2006)

References

- Sila Çetinkaya
Southern Methodist University
Engineering Management, Information, and Systems
sila@lyle.smu.edu
- Daren B. H. Cline
Texas A & M University
Dept. of Statistics
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- William B. Haskell
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Supply Chain and Operations Management Area
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- Andrew E.B. Lim
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