

Young-Bin, Woo

CONTACT INFORMATION

Department of Industrial Engineering
Seoul National University
Seoul 08826, Korea

+82-10-6248-5631
ybwoo@snu.ac.kr
<http://scm.snu.ac.kr>

EDUCATION

Seoul National University, Seoul, Korea

- Ph.D. Student in Industrial Engineering Sep. 2018 - present
- Advisor: Prof. Ilkyeong, Moon

Incheon National University, Incheon, Korea

- M.S. in Industrial and Management Engineering Sep. 2016 - Aug. 2018
- Thesis: An Integrated Optimization Approach for Generalized Supply Chain Network Design and Joint Production-inventory Control
- Advisor: Prof. Byung Soo, Kim
- B.S. in Industrial and Management Engineering Mar. 2011 - Aug. 2016

SKILLS

- **Optimization Software:** ILOG IBM CPLEX Studio, GAMS IDE, Xpress-MP, Lingo
- **Statistical (or Simulation) Software:** – Minitab, Arena
- **Programming Languages:** C#, Java, Python, HTML, PHP

RESEARCH INTEREST

- Supply Chain Management
- Scheduling
- Optimization
- Metaheuristics

PUBLICATIONS

1. **Y.-B. Woo**, B.S. Kim (2019). A genetic algorithm-based matheuristic for hydrogen supply chain network problem with two transportation modes and replenishment cycles. *Computers and Industrial Engineering*, 127, 981-997. (SCI, impact factor: 3.518)
2. **Y.-B. Woo**, B.S. Kim, I. Moon (2019) Column Generation Algorithm for a Single Machine Problem with Deteriorating Jobs and Deterioration Maintenance Activities. *Procedia Manufacturing*, 39, 1119-1128. (SCOPUS)
3. **Y.-B. Woo**, B.S. Kim (2018). Matheuristic approaches for parallel machine scheduling problem with time-dependent deterioration and multiple rate-modifying activities. *Computers and Operations Research*, 95, 97-112. (impact factor: 3.002)
4. S. Jung, **Y.-B. Woo**, B.S. Kim (2018). Two-Stage Assembly Scheduling with Batch Setup Times, Time-Dependent Deterioration, and Preventive Maintenance Activities Using Meta-Heuristic Algorithms. *Mathematical Problems in Engineering*, 2018. (SCIE, impact factor: 1.179)
5. **Y.-B. Woo**, B.S. Kim (2018). A Study on a Supply Chain Network Control Problem with Independent Replenishment Cycles under Inventory Coordination. *ICIC Express Letters*. 12(4), 353-359. (SCOPUS)
6. **Y.-B. Woo**, S. Jung, B.S. Kim (2017). A rule-based genetic algorithm with an improvement heuristic for unrelated parallel machine scheduling problem with time-dependent deterioration and multiple rate-modifying activities. *Computers and Industrial Engineering*, 109, 179-190. (impact factor: 3.518)
7. **Y.-B. Woo**, S. Cho, J. Kim, B.S. Kim (2016). Optimization-based approach for strategic design and operation of a biomass-to-hydrogen supply chain. *International Journal of Hydrogen Energy*, 41(12), 5405-5418. (impact factor: 4.084)

8. S. Cho, **Y.-B. Woo**, B.S. Kim, J. Kim (2016). Optimization-based planning of a biomass to hydrogen (B2H2) system using dedicated energy crops and waste biomass. *Biomass and Bioenergy*, 87, 144-155. (impact factor: 3.537)
9. **Y.-B. Woo**, B.S. Kim (2016). A study on identical parallel machine scheduling with deterioration and rate-modifying activities. *ICIC express letters. Part B, Applications: an international journal of research and surveys*, 7(10), 2117-2122. (SCOPUS)

WORK IN
PROGRESS

1. **Y.-B. Woo**, B.S. Kim, I. Moon. Branch-cut-and-price Algorithms for a Single Machine Problem with Deteriorating Jobs and Deterioration Maintenance Activities. *Working paper*.
2. **Y.-B. Woo**, I. Moon. Scenario-based Stochastic Programming for an Airline-driven Flight Rescheduling Problem under Ground Delay Programs. *Transportation Research Part E: Logistics and Transportation Review - 2nd revision*.
3. **Y.-B. Woo**, I. Moon, B.S. Kim. Production-Inventory Control Model for a Supply Chain Network with Economic Production Rates under no Shortages Allowed. *Computers and Industrial Engineering - under review*.

INTERNATIONAL
CONFERENCES

1. **Y.-B. Woo**, B.S. Kim, I. Moon (2019) Column Generation Algorithm for a Single Machine Problem with Deteriorating Jobs and Deterioration Maintenance Activities, International Conference on Production Research 2019, Chicago, USA.
2. **Y.-B. Woo**, B.S. Kim (2017). A Study on a Supply Chain Network Control Problem with Independent Replenishment Cycles under Inventory Coordination, International Conference on Innovative Computing, Information and Control 2017, Kurume, Japan.
3. **Y.-B. Woo**, B.S. Kim (2017). Hydrogen Supply Network Model Using Multiple Transportations with an Associated Replenishment Cycle, International Academic Conference on Business and Economics, Maui, Hawaii USA.
4. **Y.-B. Woo**, B.S. Kim (2016). A study on identical parallel machine scheduling with deterioration and rate-modifying activities, International Conference on Innovative Computing, Information and Control 2016, Harbin, China.

DOMESTIC
CONFERENCES

1. **우영빈**, 김병수, 문일경 (2019) 작업물의 퇴화와 퇴화복구작업이 고려되는 일정계획 문제의 분지평가법을 이용한 최적화 기법, 대한산업공학회 춘계학술대회.
2. **우영빈**, 정선웅, 김병수 (2017). 주기적 재주문과 재고수준을 고려한 다단계 공급사슬디자인 문제에 대한 최적화 모형, 대한산업공학회 춘계학술대회.
3. **우영빈**, 김병수 (2017). 복합적인 제품생산경로가 고려되는 공급사슬네트워크에서 다양한 제품들의 연속적 재고수준에 관한 연구, 한국SCM학회 춘계학술대회.
4. 정선웅, **우영빈**, 주철민, 김병수 (2016). Minimizing makespan in two-stage assembly scheduling problem with dynamic component-size and setup time, 대한산업공학회 춘계학술대회.
5. **우영빈**, 김병수 (2016) Relaxation-based metaheuristic approach to design hydrogen supply chain network, 대한산업공학회 춘계학술대회.
6. **우영빈**, 조설희, 김병수, 김지용 (2015). 수입의존 정도와 재고전략 추정을 위한 바이오매스 공급사슬망의 최적 설계: 제주도 사례 연구, 대한산업공학회 춘계학술대회.
7. 김지용, 김병수, 조설희, **우영빈** (2014). The optimal design of a supply chain for the generation of hydrogen energy based on renewable biomass energy source, 한국산업경영시스템학회 학술대회.

RESEARCH
PROJECTS

Projects in Seoul National University

- Study on smart aircraft / airline operating systems
(Jungseok Logistics Foundation, 2020 – present)
- Integrated System of Operations Management for Smart City Considering Smart Transportation, Energy, Environment and Security Technologies
(National Research Foundation of Korea, 2019 – present)
- Next generation integrated drone logistics system for pre & post disaster management
(National Research Foundation of Korea, 2018 – 2020)

Projects in Incheon National University

- A study on developing a framework of integrated optimization design and control for a renewable energy network
(National Research Foundation of Korea, 2016 – 2018)
- Single machine scheduling with deterioration effects and rate-modifying activities
(National Research Foundation of Korea, 2014 – 2016)

AWARDS AND
HONORS

- Brain Korea 21 Plus Scholarship, Korea, (2018 – 2019)
- 인천대를 빛낸 인천인, 인천대학교, (2016; 2017)