

## CURRICULUM VITAE

### Heungjo An

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### RESEARCH INTERESTS

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Methodology: Large Scale Optimization, Integer Programming, Network-based Algorithm, Simulation, and Time Series Analysis

Application Domain: Energy, Petrochemistry, Supply Chain Management, Production & Distribution Planning, Logistics, and Scheduling

### EDUCATION

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TEXAS A&M UNIVERSITY, COLLEGE STATION, TX, 2006 - 2011

- **Doctor of Philosophy**, Industrial and Systems Engineering (Advisor: Dr. Wilhelm)
- Dissertation: Optimization and simulation for designing the supply chain of the cellulosic biofuel industry

HANYANG UNIVERSITY, SEOUL, SOUTH KOREA, 1997 - 1999

- **Master of Science**, Material Science & Engineering (Advisor: Dr. Changhee Lee)

HANYANG UNIVERSITY, SEOUL, SOUTH KOREA, 1993 - 1997

- **Bachelor of Science**, Material Science & Engineering

### REFEREED ARTICLES IN JOURNALS

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#### PUBLISHED

1. **Heungjo An**, Wilbert E. Wilhelm, 2014, An exact solution approach based on column generation and a partial-objective constraint, to design a lignocellulosic biofuel supply chain, *Computers & Chemical Engineering*, 71, pp.11–23 (SCI, IF: 2.45)
2. **Heungjo An**, Hyunsoo Lee, 2014, An integrated single vendor-single buyer production inventory system incorporating warehouse sizing decisions, *Journal of the Korean Institute of Industrial Engineers*, 40 (1), pp. 108-117
3. **Heungjo An**, Stephen W. Searcy, 2012, Economic and energy evaluation of a logistics system based on biomass modules, *Biomass & Bioenergy*, 46, pp. 190-202 (SCIE, IF:3.65)
4. **Heungjo An**, Wilbert E. Wilhelm, Stephen W. Searcy, 2011, A mathematical model to design a lignocellulosic biofuel supply chain system with a case study based on a region in Central Texas,

Bioresource Technology, 102 (17), pp. 7860-7870 (SCI, IF:4.98)

5. **Heungjo An**, Wilbert E. Wilhelm, Stephen W. Searcy, 2010, Biofuel and Petroleum-based Fuel Supply Chain Research: A Literature Review, Biomass & Bioenergy, 35 (9), pp.3763-3774 (SCIE, IF:3.65)
6. **Heungjo An**, Chan Woo Lee, Changhee Lee, 2000, Grain Growth Modeling of C-Mn Structural Steel in the Weld HAZ, Journal of the Korean Institute of Metals and Materials, 38 (6), pp.841-850 (SCIE, IF:1.20)

## **PRESENTATIONS**

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1. Supply Chain Optimization of Bioenergy Industry, Invited Seminar at Kumho National Institute of Technology, Gumi, Korea, November 2012
2. An Exact Solution Approach to Design a Lignocellulosic Biofuel Supply Chain, Invited Seminar at POSTECH, Pohang, Korea, May 2012
3. A Column Generation Approach to Design a Biofuel Supply Chain, IIE Annual Conference, Reno, May 2011
4. A Multi-commodity Flow Approach for Biomass/Biofuel Supply Chain Design, INFORMS Annual Meeting, Austin, December 2010

## **PROFESSIONAL ACTIVITIES**

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### CONFERENCE ORGANIZATION

- Session chair, "Biofuel Supply Chain", IIE Annual Conference, Reno, May 2011.
- Organization of the 2<sup>st</sup> Web Conference for IBSAL workgroup, March 2011 (Texas A&M, U. of Arkansas, U. of British Columbia, and Oak Ridge National Lab)
- Organization of the 1<sup>st</sup> Web Conference for IBSAL workgroup, December 2010 (Texas A&M, U. of Arkansas, U. of British Columbia, and Oak Ridge National Lab)

### REFEREE FOR TECHNICAL PAPERS

- Chemical Engineering Journal, July 2014
- European Journal of Operational Research, October 2012
- Energy Systems, December 2011
- IIE Transactions, March 2010
- Annals of Operational Research, February 2009

### RESEARCH PROJECTS

1. An acceleration technique based on column generation for solving large-scale non-linear planning problems in the chemical process industry, 2014.12 – present, KFUPM
2. Development of forecasting models to predict prices of chemical products based upon time series analysis method, 2011.3 -2014.7, LG Chem
3. Development of scheduling system for naphtha cracking center, 2012.1 - 2012.12, LG Chem

4. Economic and environmental evaluation of biomass logistics systems for biofuels, 2008.5 - 2011.8, U.S.  
Department of Energy

## **TEACHING EXPERIENCES**

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### **INSTRUCTOR**

- Operations Research I & II, KFUPM
- Facility Layout and Location, KFUPM
- Principles of Industrial Costing, KFUPM
- Economic Analysis of Engineering Projects, Texas A&M

### **MEMBERSHIP**

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- Member, Korean Institute of Industrial Engineers (KIIE)
- Member, Institute of Industrial Engineers (IIE)
- Member, Institute for Operations Research and the Management Sciences (INFORMS)

### **INDUSTRIAL EXPERIENCES**

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- 2011 - 2013: Operations Research Analyst, LG Chem, Korea
- 2001 - 2006: IT System Engineer, Daewoo Information System Co, Ltd., Korea.

### **HONORS AND AWARDS**

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- On-Spot Incentive (Development of feedstock-price forecasting models based upon time series analysis), LG Chem Research Park, 2012
- Graduate Student Research and Presentation Grant, Office of Graduate Studies, Texas A&M University, 2011
- Nominated for Annual INFORMS Professional Colloquium, Chicago, 2011
- Nominated for 9th Annual IIE Doctoral Colloquium, Cancun, Mexico, 2010
- Appreciation for Conducting the Workshop, by INFORMS student chapter at Texas A&M, 2008
- Appreciation for Officer-webmaster, by INFORMS student chapter at Texas A&M, 2007
- Admission Full Scholarship (Ranked 2nd in the Dept. of Material Science & Engineering), by Hanyang University, Seoul, Korea, 1993

### **CERTIFICATES**

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- ITIL (IT-Service Management) Foundation, by Exin, 2006
- Sun Certified Java Programmer, by Sun Microsystems, Inc., 2001
- SAP R3 Application Consultant 'ABAP/4 Development Workbench', by SAP Co, Ltd., 1998

## **COMPUTER SKILL**

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- Optimization & Math Tool: IBM ILOG CPLEX, MATLAB, SAS, R, JMulti
- Simulation Tool: ExtendSim, Arena
- Programming Language: Java, C/C++/C#, Excel VBA
- Database: Oracle, MSSQL, MS-Access

## **SOCIAL ACTIVITY**

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- Volunteer teacher of Korean language for Korean American children in College Station, TX, 2008.2-2008.6
- Volunteer webmaster of the student chapter of the INFORMS at Texas A&M, 2006.9 – 2007.12.
- President of the fencing club at Hanyang University, 1994.2-1995.1