

May 15th 2024

VITA

I. PERSONAL DATA

Name: Kyung Jo Min
Address: Industrial and Manufacturing Systems Engineering
3004 Black Engineering, 294-8095
Graduate Faculty Status: Member

II. EDUCATION

Ph.D. University of California, Berkeley, Industrial Engineering and
Operations Research, May 1990
M.S. University of California, Berkeley, Industrial Engineering and
Operations Research, Dec. 1985
B.S. Summa Cum Laude, University of California, Los Angeles,
Math-Systems Science, June 1984

III. ACADEMIC EXPERIENCE

**Associate Professor, Iowa State University, 1996-2023 full time;
2024-Present ½ time**
**John B. Slater Fellow of Sustainable Design and Manufacturing, Iowa
State University, 2019-Present**
Director of Undergraduate Education, IMSE Department, Iowa State
University, 2002-2023
Assistant Professor, Iowa State University, 1990-1996
Research Assistant, University of California, Berkeley, 1987-1989
Teaching Assistant, University of California, Berkeley, 1985-1989

IV. INDUSTRIAL AND OTHER NON-ACADEMIC EXPERIENCE

Graduate Student Internship, California Public Utilities Commission
Telecommunication Operations Cost Branch, April 1988-August 1988

V. HONORS AND AWARDS

INFORMS Moving Spirit Chapters/Fora Award, 2023
IMSE Chair's Choice Award, 2021
ISU Engineering Student Council Leadership Award, 2005
Sigma Xi Honor Society, ISU
Phi Kappa Phi Honor Society, ISU
University of California, Berkeley, Regent Fellowship (1984-1985)
Phi Beta Kappa Honor Society, UCLA

VI. ACADEMIC AREAS OF SPECIALIZATION

Teaching:

IE 304, Analysis of Engineering Economy, (1993F)

IE 312, Optimization, (1991S; 1992S, F; 1993S; 1997S, F)

IE 341, Production Systems, (1994S, F; 1995S, F;

1996S, F; 1998F; 1999S, F; 2000S, F; 2001S; 2002S; 2003S;

2004S, F; 2005F; 2006F; 2007F; 2008F; 2009F; 2010F; 2011F;

2012F; 2013F; 2014F; 2015F; 2016F; 2017F; 2018F-2 Sections;

2019F-on campus and online sections; 2020F-on campus and

online sections; 2021F-on campus and online sections; 2022F-on

campus and online sections; **2023F-on campus and online**

sections)

IE 403, Introduction to Sustainable Production Systems, (2005F; 2007S;

2009S; 2011S; 2013S; 2015S; 2017S; 2019S; 2021S; 2023S)

IE 405, Advanced Engineering Economy for Complex Engineering

Projects, (2015F; 2016S; 2017S; 2018 S; 2020S; 2022S)

IE 421X/IE422X, International Lean Manufacturing Production Systems

and Lean Manufacturing Production Systems, (2007S, 2008S)

IE 490C, Independent Study on Quantitative Supply Chains, (2002F, 41

students); 2003S(6 students) &F (7 students).

IE 501, Dynamics and Economics of Production, (1990F; 1991F)

IE 503, Introduction to Sustainable Production Systems, (2005F;

2007S; 2009S; 2011S; 2013S; 2015S; 2017S; 2019S; 2021S;

2023S)

IE 505, Advanced Engineering Economy for Complex Engineering

Projects, (2015F; 2016S; 2017S; 2018S; 2020S; 2022S)

IE 508, Design and Analysis of Allocation Mechanisms, (1991S;

1992S; 1993S; 1994S; 1996S; 1997S; 1998S; 1999S;

2000S; 2001S; 2002S; 2003S; 2004S; 2006F, 2008F, 2010F,

2012F; 2014F; 2021S; 2023S)

IE 514, Production Scheduling (1998S)

IE 541, Inventory Control and Production Planning, (1991F;

1992F; 1993F; 1995S, F; 1996F; 1997F; 1998F; 1999F; 2000F;

2001F; 2002F, 2003F; 2005S; 2006S; 2008S; 2010S; 2012S

(including Dual Degree Section in Cedar Rapids); 2014S; 2016S;

2018S; 2020S; 2022S; **2024S**)

IE 631, Nonlinear Programming, (1990S; 2007F; 2009F; 2011F; 2013F)

Course/Curriculum Development

IE 405/505, “Advanced Engineering Economy for Complex Engineering Projects,” a dual-listed course, Fall 2015.

IE 403/503, “Introduction to Sustainable Production Systems,” a dual-listed course, Fall 2005.

IE 508, “Design and Analysis of Allocation Mechanisms,” a graduate course, Spring 1991.

IE 501, “Dynamics & Economics of Production,” a graduate course, F 1990.

Research Areas:

Economic Decision-Making under Uncertainty (Real Options – Applications to Energy Systems, Supply Chains, Engineering Projects, Sustainable Design and Manufacturing).

Pricing, Costing, and Allocation Mechanisms and Policies
Production and Service Systems

Teaching and Learning of Economic Decision-Making under
Uncertainty – Visual and Other Aids

VII. GRANTS AND CONTRACTS

Principal Investigator, “Productivity Examination of Post COVID-19 Office Hours for Engineering Education,” with John Jackman, \$16,000, IMSE Exploratory Research Projects Program, Iowa State University, 5/16/23-12/31/23.

Co-Principal Investigator, “Design Iteration Support Tool to Sustain Remanufacturability,” with G. Kremer, M. Frank, and C. Hu, \$249,250, REMADE Institute, 8/26/20-12/31/23.

Principal Investigator, “Distributed Solar and Wind Power Generation Planning in Rural and Underserved Areas,” with Cam MacKenzie, \$243,036, Iowa Energy Center, 4/1/20-3/31/22.

Principal Investigator, “Visual and Tactile Learning and Teaching Aids for Abstract Concepts,” with J. Jackman, Dean’s Excellence for Learning and Teaching Grant, \$25,000, College of Engineering, Iowa State University, 6/30/21-7/1/22 (+ IMSE Matching Fund of \$1,400).

Principal Investigator, “Visualization Aids for Enhanced Teaching and Learning of Stochastic Optimal Control Applications,” \$16,000, IMSE Exploratory Research Projects Program, Iowa State University, 1/1/21-

5/15/21.

Principal Investigator, “Carbon Emission-Based Flexible Design for Sustainability,” IMSE Exploratory Research Projects Program, \$16,500, Department of Industrial and Manufacturing Systems Engineering, Iowa State University, 8/16/21-5/15/22.

Co-Principal Investigator, “Cross-Industry Utilization of Ground Tire Rubber for Energy Efficient Pavements,” with R. C. Williams, E. Cochran, G. Kremer, \$415,000, REMADE Institute, 10/1/19-9/30/21.

Principal Investigator, “Quantified Financial Risk Reduction towards Sustainable Clean Power Grid,” IMSE Exploratory Research Projects Program, \$9,000, Department of Industrial and Manufacturing Systems Engineering, Iowa State University, 5/16/20-8/15/20.

Principal Investigator, “Solving Emerging Engineering Problems for a Climate-Changed World,” with Matt Frank and Rick Stone, \$15,000, IMSE Teaching and Learning Seed Grant, Iowa State University, Summer 2019.

Principal Investigator, “The Teaching Materials on Non-Monetary Performance Measures for Production Systems Decisions,” with John Jackman, \$2,000, IMSE Teaching and Learning Small Grant, Iowa State University, Summer 2019.

Principal Investigator, “Blockchain-Based Acquisition System for Public Sectors,” with J. Jackman, \$22,108, CoE Exploratory Research Projects Program, College of Engineering, Iowa State University, 5/16/18-12/31/18.

Principal Investigator, “Real Options Valuation of “Ilities” in Blockchain: For-Profit Supply Chains Case,” with J. Jackman, \$14,847, IMSE Exploratory Research Projects Program, Department of Industrial and Manufacturing Systems Engineering, Iowa State University, 8/16/18-12/31/18.

Co-Principal Investigator, “Product Architecture Customization Decision Support Tool Development for End-of-Life Options and Servitization Potential,” with G. Kremer and K. Park, \$30,000, eDesign Center, IUCRC, National Science Foundation, January 2017-June 2018.”

Principal Investigator, “Critical Life-Cycle Decision Making in Complex

Engineering Projects for Engineering Economy Courses,” with Jackman, \$250,000, National Science Foundation, August 2015-July 2018;
Supplementary Research Experiences for Undergraduates (REU):
Visualization Aids for Education of Decision Making in Complex
Projects, \$32,100, September 2016-July 2018.

Co-Principal Investigator, “Generation Expansion Planning: Portfolio
Optimization,” with J. McCalley and S. Ryan, \$150,000, Electric Power
Research Center, ISU, August 2008-May 2011.

Principal Investigator, “Critical Investigation of Reduce, Reuse, and
Recycle (3R) Policies: A Market-Based Environmental Sustainability
Study toward Expanded Economic Liberty,” \$50,000, Searle Freedom
Trust, October 2008-June 2010.

Min, “World Class Logistics Assessment,” \$ 13,273, Pella Corporation
and IPRT, ISU, March-June 2009.

Principal Investigator, “A Comparative study for a global production
network,” with Potter, Deere and IPRT, April 2007-August 2007, \$21,071.

Principal Investigator, “Productivity Assessment and Improvement of
Rockwell Facilities in Iowa,” Rockwell and IPRT, January 2007-July
2007, \$22,263.

Principal Investigator, “Citizen-Based Assessment and Improvement of E-
Government Services for Small and Medium-Sized Communities in
Midwestern States,” Sloan Foundation, Co-PI’s, Ryan, Jackman, and
Patterson, July 2005-June 2007, \$45,000.

Co-Principal Investigator, “ISU/Industry Kaizen Pilot Program,” with L.
Potter and F. Peters, John Deere Foundation, \$4,662, January 2006-June
2006.

Co-Principal Investigator, “IMSE International Kaizen Course
Development,” with F. Peters and L. Potter, Council on International
Programs, ISU, \$9,000 (including \$4,000 matching from Engineering
International Programs & Services), January 2006-June 2006.

Principal Investigator, “A Course Project on Global Supply Chains
for Trinational Bilingual Student Teams,” Council on International
Programs, ISU, \$6,000 (including \$1,000 matching from IMSE
Department), January 2005-June 2005.

Principal Investigator, “Internet Voting in Rural Communities,” Carnegie Corporation, November 2003-June 2005, \$15,000.

Principal Investigator, “E-Government in Rural Communities: Current Practices and Issues,” IBM Endowment for The Business of Government, May-October 2003, \$15,000.

Principal Investigator, “An Exploratory Study on the Size/Quantity of the Reels for Three Representative Chips,” Rockwell Coralville and CATD-ICAP, May 2002-January 2003, \$3,343.

Principal Investigator, “Workforce Scheduling System for Airline and Airport Operations,” Sciengistics and CATD-TCAP, February-September 2002, \$30,594.

Principal Investigator, “Workforce Scheduling System for Airline and Airport Operations,” Sciengistics and CATD-TCAP, February-September 2002, \$30,594.

Principal Investigator, “Economic Development Strategies Based on Emerging Technology: The Case of Rural Internet Development,” US Department of Commerce, July 2000–June 2002, \$15,000.

Principal Investigator, “Technology Investment in Rural Communities and Its Impact on Standard Living,” Vice Provost for Research and Advanced Studies, January 2001-May 2002, \$9,900.

Principal Investigator, “Evaluation of Printed Circuit Board (PCB) Assembly Strategies,” CATD-ICAP for Rockwell Coralville, July 2001-February 2002, \$2,343.

Principal Investigator, “Workforce Scheduling Methods for Airline and Airport Operations,” CATD-ICAP for Sciengistics, October 2001 - December 2001, \$2,343.

Co-Principal Investigator, “An Enabling System for Market-Driven Collaborative Product Design and Recycling,” National Science

Foundation, with S. Ryan, P. Egbelu, D. Gemmill, A. Qamhiyah, D. Jacobson, and S. Olafsson, August 2000 – December 2001, \$180,002.

Principal Investigator, “Line and Facility Planning via Goal

Programming,” CATD-ICAP for Rockwell - Coralville, September 2000 – June 2001, \$2,215.

Principal Investigator, “Capital Budgeting Projects Risk Management for Electric Utilities Under Competition,” Electric Power Research Institute/MidAmerican Energy, January 1999-December 2000, \$58,000.

Principal Investigator, “Exploration of the SIMNET II Package for Material Handling at Lennox,” CATD-ICAP for Lennox - Marshalltown, June 2000 – August 2000, \$2,152.

Principal Investigator, “Optimal Production Line Layout and Strategic Analysis,” Rockwell – Coralville/CATD-IIP, August 1999 – August 2000, \$26,010.

Principal Investigator, “Optimal Production Line Design and Analysis,” CATD-ICAP for Rockwell – Coralville, July 1999 – February 2000, \$2,152.

Principal Investigator, “Exploration and Classification of Outsourcing Data,” CATD-ICAP for Rockwell –Cedar Rapids, July 1999, \$2,152.

Principal Investigator, "Capital Budgeting Analyses for Electric Utilities under Competition," EPRC/MidAmerican Energy Program and Power Affiliate Program, Electric Power Research Center, Iowa State University, August 1996-May 1999, \$21,300.

Principal Investigator, "An Integrated Resource Planning Model under Competition," EPRC/MidAmerican Energy Program, Electric Power Research Center, Iowa State University, January 1997-December 1998, \$15,000.

Principal Investigator, “Test Scheduling Model and Analysis,” Square D Company/CATD-IIP/ICAP, June-August 1998, \$10,977.

Principal Investigator, "Simplifying the Prediction of Labor Hours Needed for a Project," NSF-GOALI, with M. Scheldrup, M. Stevens, and S. Larson, July 1996-July 1998, \$16,715 (substituted for S. Filipowski when she left Iowa State University in July 1996).

Principal Investigator, "A Productivity Study on Seed Plant Operation and Staffing," Pioneer Hi-Bred International, Johnston, Iowa, December 1995-December 1997, total of \$6,000 plus all travel-related expenses.

Principal Investigator, "NSF-GOALI, Matching Funds from Rockwell Collins Avionics & Communications Division," with M. Scheldrup, M. Stevens, and S. Larson, June 1996-May 1997, \$3,820 (substituted for S. Filipowski when she left Iowa State University in July 1996).

Principal Investigator, "Economic Quantification of Critical Factors and Capital Budgeting for Electric Utilities," Electric Power Research Center, Iowa State University, July 1995-December 1996, \$16,895.

Principal Investigator, "A Capital Budgeting System for Electric Utilities," Power Affiliate Program Support, Electric Power Research Center, Iowa State University, January 1995-December 1996, \$12,510.

Principal Investigator, "Design and Analysis of Economic Quantification Procedures for Utility Application," Midwest Power - A Midwest Resources Utility, Des Moines, Iowa, June-December 1995, \$5,288.

Principal Investigator, "Efficient Allocation of Electric Power Via Trilateral Brokerage," Electric Power Research Center, Iowa State University, December 1993-May 1995, \$12,850.

Principal Investigator, "Optimally Locating Repair Units for Power Failure," Power Affiliate Program Support, Electric Power Research Center, Iowa State University, August 1992-May 1994, \$11,880.

Principal Investigator, "Economic Determination of Specification Levels and Delivery Priorities for Semiconductor Products," NSF Research Initiation Grant, Division of Design and Manufacturing, Program of Operations Research and Production Systems, August 1991-May 1994, \$55,286; "Research Experiences for Undergraduates (REU) for NSF Research Initiation Grant", Division of Design and Manufacturing, Program of Operations Research and Production Systems, February 1992-January 1993, \$5,250.

Co-principal Investigator, "Manufacturing Fellows Program in Concurrent Engineering Design," Department of Education, with J. Jackman, W. Kuo, D. Gemmill, R. Linn, and R. Pandit, 1991-1994, \$300,315.

Principal Investigator, "Undergraduate Fellowship on Optimal Determination of Production Quantity and Demand Rate under Competition," Iowa Center for Emerging Manufacturing Technology, November 1992-October 1993, \$2,000.

Principal Investigator, "Undergraduate Fellowship on Economic Determination of Spec. Levels and Delivery Priorities of Semiconductor Products," Iowa Center for Emerging Manufacturing Technology, December 1991-May 1993, \$2,000.

Principal Investigator, "Priority Pricing for Electric Power," Power Affiliate Program Support, Electric Power Research Center, Iowa State University, August 1990-May 1993, \$22,500.

Principal Investigator, "Capital Investment Model on Setup and Inventory Holding Cost Reduction under Competition," Engineering Research Institute Grant, Iowa State University, September 1991-May 1992, \$4,300.

Principal Investigator, "Concurrent Design of Production/ Inventory Control and Pricing Mechanism," Engineering Research Institute Grant, Iowa State University, September 1990- May 1991, \$3,950.

Principal Investigator, "Optimal Specification Design for Semiconductor Products," University Research Grant, Iowa State University, May 1990-May 1991, \$2,900.

Principal Investigator, "Priority Pricing of Shared Resources – An Efficient Allocation Mechanism," Engineering Research Institute Grant, Iowa State University, January 1990-May 1990, \$1,350.

Proposal Submitted (7/23)

Principal Investigator, "Rural Generation Planning with Carbon Management," Cam MacKenzie, \$194,021, Iowa Energy Center, 10/23-9/26.

VIII. TECHNICAL PUBLICATIONS

Refereed Journals:

Nur, G. N., C. MacKenzie, and K. J. Min, 2023, "A Real Options Analysis Model for Generation Expansion Planning Under Uncertain Demand," *Decision Analytics Journal*, Vol. 8, 100263.

Sadat, M. A., G. Kremer, and K. J. Min, 2023, "A Real Options Model for Remanufacturing Facility Installation Decisions," *Decision Analytics Journal*, Vol. 7, 100222, at <https://doi.org/10.1016/j.dajour.2023.100222>.

Kucuksayacigil, F. and K. J. Min, 2022, “The value of jumboization in transportation ships: A real options approach,” *IISE Transactions, Design and Manufacturing*, Vol. 54, pp. 858-868.

Min, K. J. and J. Jackman, 2022, “Real Option-Based Decision Model for Fuel Saving Devices in Transportation Vehicles under Flexible Design,” *The Engineering Economist*, Vol. 67, pp. 1-23.

Kucuksayacigil, F. and K. J. Min, 2021, “A Lattice Method for Jump-Diffusion Process Applied to Transmission Expansion Investments under Demand and Distributed Generation Uncertainties,” *Energy Systems*, Vol. 12, pp. 773-800.

Min, K. J., L. Lilienkamp, J. Jackman, and C. Wang, 2020, “Supply Contracts for Technology-Oriented Critical Materials of High Volatility and Their Ramifications for Supply Chains,” *The Engineering Economist*, Vol. 65, pp. 266-287.

Zhao, Z. and K. J. Min, 2020, “Traceability Valuation in Blockchain-Based Supply Chains for Perishable Agricultural Products Under Demand Uncertainty,” *International Journal of Operations Research and Information System*, Vol. 11, pp. 1-32.

Wang, C. H. and K. J. Min, 2020, “Transition from Coal-Based to Natural Gas-Based Power Plants under Market-Based Permits for Carbon Dioxide Emission: A Real Options Approach,” *International Journal of Sustainable Economy*, Vol. 12, pp. 344-363.

Malladi, S., W. Shi, Z. Zhao, and K. J. Min, 2020, “The Impacts of Product Life and Recyclability on Landfill Disposal in Closed Loop Supply Chains,” *International Journal of Sustainable Economies Management*, Vol. 9, pp. 59-77.

Kucuksayacigil, F. and K. J. Min, 2018, “Expansion Planning for Transmission Network under Demand Uncertainty: A Real Options Framework,” *The Engineering Economist*, Vol. 63, pp. 20-53.

Shi, W., Tianke Feng, and K. J. Min, 2016, “Remanufacturing Decision and Sustainability Under Product Life Cycle Uncertainty,” *The Engineering Economist – Special Issue on Engineering Economics and Sustainable Systems*, Vol. 61, pp. 223-243.

- Shi, W. and K. J. Min, 2015, "Remanufacturing Decisions and Implications under Material Cost Uncertainty," *International Journal of Production Research – Special Issue on Green Manufacturing*, Vol. 53, pp. 6421-6435.
- Shi, W. and K. J. Min, "Product Remanufacturing: A Real Options Approach," *IEEE Transactions on Engineering Management*, Vol. 61, pp. 237-250, 2014.
- Shi, W. and K. J. Min, "Product Remanufacturing and Replacement Decisions Under Operations and Maintenance Cost Uncertainties," *The Engineering Economist - Special Issue on Engineering Economics in Reliability, Replacement and Maintenance*, Part 1, Vol. 59, pp. 154-174, 2014.
- Wang, C. and K. J. Min, "Electric Power Plant Valuation Based on Day-Ahead Spark Spreads," *The Engineering Economist*, Vol. 58, pp. 157-178, 2013.
- Shi, W. and K. J. Min, "A Study of Product Weight and Collection Rate in Closed-Loop Supply Chains with Recycling," *IEEE Transactions on Engineering Management*, Vol. 60, pp. 409-423, 2013.
- Min K. J., J. Jackman, and D. Gemmill, "Assessment and Evaluation of Objectives and Outcomes for Continuous Improvement of an Industrial Engineering Program," *International Journal of Engineering Education*, Vol. 29, pp. 520-532, 2013.
- Daniel, S., C. Lou, and K. J. Min, "Economic Models for Cogeneration Facilities and Host Utilities under the Right to Sell Provision," *Electric Power Systems Research*, Vol. 103 pp. 214– 222, 2013.
- Min, K. J., C. Lou, and C. Wang, "An Exit and Entry Study of Renewable Power Producers: A Real Options Approach," *The Engineering Economist*, Vol. 57, pp. 55-75, 2012.
- Wang, C. and K. J. Min, "Improving Financial Performance with Hedging via Forwards for Electric Power Generation Companies," *The Engineering Economist*, Vol. 55, pp. 246–267, 2010.
- Wang, C. and K. J. Min, "Short-Term Electric Power Trading Strategies for Portfolio Optimization," *The Engineering Economist*, Special Issue on Energy Economics, Vol. 53, pp. 365-379, 2008.

Li, J., K. J. Min, T. Otake, and Van Voorhis, "Inventory and Investment in Setup and Quality Operations under Return on Investment Maximization," *European Journal of Operational Research*, Vol. 185, pp. 593-605, 2008.

Ball, P., H. Grierson, K. J. Min, J. Jackman, and P. Patterson, "Working on an Assignment With People You'll Never Meet: Case Study on Learning Operations Management in International Teams," *International Journal of Engineering Education*, Vol. 23, pp. 368-377, 2007.

Wang, C. and K. J. Min, "Electric Power Generation Planning for Inter-Related Projects: A Real Options Approach," *IEEE Transactions on Engineering Management*, Vol. 53, pp. 312-322, 2006.

Malladi, S. and K. J. Min, "Decision Support Models for the Selection of Internet Access Technologies in Rural communities," *Telematics and Informatics*, Vol. 22, pp. 201-219, 2005.

Kim, S. C. and Min, K. J., "Determining Multi-Criteria Priorities in the Planning of Electric Power Generation: The Development of an Analytic Hierarchy Process for Using the Opinions of Experts," *International Journal of Management*, Vol. 31, pp. 186-193, 2004.

Cahyadi, R., Min, K. J., Wang, C., and Abi-Samra, N., "Generation Unit Selection via Capital Asset Pricing Model for Generation Planning," *International Journal of Energy Research*, Vol. 27, pp. 1251-1263, 2003.

Min, K. J. and Subramaniam, P.S., "A Generation Expansion Model for Electric Utilities with Stochastic Stranded Cost," *International Journal of Electric Power & Energy Systems*, Vol. 24, pp. 875-885, 2002.

Otake, T. and Min, K. J., "Inventory and Investment in Quality Improvement under Return on Investment Maximization," *Computers & Operations Research*, Vol. 28, pp. 997-1012, 2001.

Subramaniam, P. S. and Min, K. J., "A Chance Constrained Capital Investment Decision Model for Electric Utilities," *Journal of Engineering Valuation and Cost Analysis*, Vol. 3, pp. 437-447, 2000.

Wang, C. and Min, K. J., "Generation Planning with Quantified Outage Costs," *Electric Power Systems Research*, Vol. 54, pp. 37-46, 2000.

Srinivas, D. and Min, K. J., "A Simplified Procedure for Estimating

Labor-Hour Requirements of Discrete Assemblies," International Journal of Management, Vol. 17, pp. 224-230, 2000.

Chen, C. and Min, K. J., "Optimal Inventory Policies in Response to a Pre-announced Sale," International Journal of Operations and Quantitative Management, Vol. 5, pp. 151-169, 1999.

Otake, T., Min, K. J., and Chen, C., "Inventory and Investment in Setup Operations Under Return on Investment Maximization," Computers & Operations Research, Vol. 26, pp. 883-899, 1999.

Wang, C. and Min, K. J., "An Integrated Resource Planning Model for Utilities with Quantified Outage Costs," International Journal of Electric Power & Energy Systems, Vol. 20, No. 8, pp. 517-524, 1998.

Yao, M. and Min, K. J., "Repair Unit Location Models for Power Failures," IEEE Transactions on Engineering Management, Vol. 45, pp. 57-65, 1998.

Son, H. and Min, K. J., "A Capital Budgeting Process for Electric Power Utilities - An Analytic Hierarchy Process Approach," International Journal of Energy Research, Vol. 22, pp. 671-681, 1998.

Chen, C. and Min, K. J., "A Trilateral Brokerage System for Power Transactions," International Journal of Energy Research, Vol. 21, pp. 911-921, 1997.

Soesilo, D. and Min, K. J., "An Inventory Model with Variable Levels of Quality Attributes via Geometric Programming," International Journal of Systems Science, Vol. 27, pp. 379-386, 1996.

Chen, C. and Min, K. J., "Optimal Inventory and Disposal Policies in Response to a Sale," International Journal of Production Economics, Vol. 42, pp. 17-27, 1995.

Chen, C. and Min, K. J., "A Competitive Inventory Model with Options to Reduce Setup and Inventory Holding Costs," Computers and Operations Research, Vol. 22, pp. 503-514, 1995.

Min, K. J. and Oren, S. S., "Economic Determination of Spec. Levels and Allocation Priorities of Semiconductor Products," IIE

Transactions - IE Research, Vol. 27, pp. 321-331, 1995.

Chen, C., Johnson, K., and Min, K. J., "Analyses of Sensitivity and Competition of an EOQ Model," International Journal of Systems Science, Vol. 26, pp. 1559-1570, 1995.

Chen, C. and Min, K. J., "A Multi-Product EOQ Model with Pricing Consideration - T. C. E. Cheng's Model Revisited," Computers and Industrial Engineering, Vol. 26, pp. 787-794, 1994.

Chen, C. and Min, K. J., "An Analysis of Optimal Inventory and Pricing Policies under Linear Demand," Asia-Pacific Journal of Operational Research, Vol. 11, pp. 117-129, 1994.

Min, K. J., "Inventory and Pricing Policies under Competition," Operations Research Letters, Vol. 12, pp. 253-261, 1992.

Min, K. J., "Inventory and Quantity Discount Pricing Policies under Profit Maximization," Operations Research Letters, Vol. 11, pp.187-193, 1992.

Chen, C. and Min, K. J., "Optimal Selling Quantity and Purchasing Price for Intermediary Firms," International Journal of Operations and Production Management, Vol. 11, pp. 64-68, 1991.

- Journal Manuscript Submitted/Revised/Under Review

Sadat, M. A. and K. J. Min, 2023, "Remanufacturing Facility Installation Decision under New Product's Purchasing and Remanufacturing Costs Uncertainty: A Real Options Approach, under 1st revision for Sustainable Manufacturing and Service Economics.

Nur, G. N., C. MacKenzie, and K. J. Min, 2023, "Valuation of a sequential compound option considering generation and transmission expansions," submitted to *Green Technologies and Sustainability*.

Refereed Proceedings Papers:

Sadat, M. A., Zhao, Z., Kremer, G. E., & Min, K. J. (2023). Exit Decision Valuation under Remanufacturing Cost Uncertainties: A Real Options Approach. Proceedings of the IISE Annual Conference & Expo 2023 (Presenter: Sadat).

Min, K. J., Jackman, J., & Zhao, Z. (2022, August). Work in Progress: Visual Learning and Teaching Aids for Abstract Concepts in Inventory Control towards Better Learning Outcomes. In *2022 ASEE Annual Conference & Exposition*. (Publication date: 08/23/2022; Poster Presentation by Min)

Zhao, Z. and K. J. Min, 2021, "Preventive Surface Treatment Decision on Asphalt Road Under Maintenance Cost Uncertainty," *Proceedings of the 2021 IISE Annual Conference*, Online, May 2021 (Presenter: Zhao; Virtual Presentation).

Wang, C. and K. J. Min, 2020, "Optimal Reserve Margins for Electric Power Utility Companies," *Proceedings of the 2020 IISE Annual Conference*, New Orleans, LA, Online October 2020 (Presenter: Wang).

Zhao, Z., McCloskey, M., Sackpraseuth, A., Jackman, J., and Min, K. J. 2020, "Decision Support for Arctic Area Infrastructures under Changing Climate and Uncertainty," *Proceedings of the 2020 IISE Annual Conference*, New Orleans, LA, Online October 2020 (Presenter: Zhao).

Zhao, Z., F. Niayeshpour, J. Jackman, and K. J. Min, "Set Design Valuation for Transportation Vehicles under Fuel Cost Volatility," *Proceedings of the 2020 IISE Annual Conference*, New Orleans, LA, Online October 2020 (Presenter: Zhao).

Zhao, Z., J. Jackman, and K. Jo Min, 2019, "Engineering Economic Valuation of Ready-Made Design for Transportation Vehicles," *Proceedings of International Conference on Engineering and Technology*, Albany, New York (Presenter: Min).

Zhao, Z., J. Jackman, and K. Jo Min, 2019, "Logistic Depot Planning under Repair and Maintenance Cost Uncertainties under Changing Climate," *Proceedings of International Conference on Engineering and Technology*, Albany, New York (Presenter: Min).

Min, K. J., J. Jackman, and Z. Zhao, 2018, "Work in Progress: Visual and Tactile Aids in Multidisciplinary Engineering for Better Learning Outcomes," *Proceedings of ASEE Annual Conference & Exposition*, Salt Lake City, Utah (Presenter: Jackman).

Min, K. J., J. Jackman, and F. Niayeshpour, 2018, "Enhancing Critical Life-Cycle Decision Making in Complex Engineering Projects in the Context of Engineering Economy Courses," NSF Poster Session Paper,

Proceedings of ASEE Annual Conference & Exposition, Salt Lake City, Utah (Presenter: Min).

Kucuksayacigil, F. and K. J. Min, 2017, “Value of Jumboization in Ship Design: A Real Options Approach,” *Proceedings of the 2017 Industrial and Systems Engineering Conference*, Pittsburgh, PA (Manufacturing and Design Division Best Track Paper, 2nd Place).

Croghan, J., K. J. Min, and J. Jackman, 2017, “Estimation of Geometric Brownian Motion Parameters for Oil Price Analysis,” *Proceedings of the 2017 Industrial and Systems Engineering Conference*, Pittsburgh, PA.

Min, K. J., J. Jackman, and M. Zugg, 2017, “Economic Decision Making for Projects under High Volatility,” *Proceedings of the 2017 Industrial and Systems Engineering Conference*, Pittsburgh, PA.

Min, K. J., J. Jackman, and M. Zugg, 2017, “Visualization Aids for Abstract Concepts Towards Better Learning Outcomes,” *Proceedings of the Frontiers in Education Conference*, Indianapolis, IN.

Min, K. J., J. Jackman, and M. Zugg, “Critical Life-Cycle Decision Making for Projects under Uncertainty,” Engineering Economy Division, *Proceedings of ASEE Annual Conference & Exposition*, New Orleans, Louisiana, June 2016.

Min, K.J., J. Jackman, and J. Chan, “Visual Models for Abstract Concepts towards Better Learning Outcomes and Self-Efficacy,” Educational Research and Methods Division, *Proceedings of ASEE Annual Conference & Exposition*, Indianapolis, Indiana, June 2014.

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IX. TECHNICAL PRESENTATIONS

Nur, G. N., C. MacKenzie, and K. J. Min, 2023, “Renewable Generation Planning with Carbon Management, Iowa Energy Summit, Altoona, Iowa, November (Speaker: Nur).

Nur, G. N., C. MacKenzie, and K. J. Min, 2023, “Valuing a Sequential Compound Option Considering Generation and Transmission Expansions under Demand Uncertainty,” INFORMS Annual Conference, Phoenix, Az, October 15-18 (Speaker: Nur).

Bradley, S., A. Hoffmeister, M. A. Sadat, J. Jackman, K. J. Min, 2023, “Remanufacturing and Recycling Decisions for Critical Parts and Materials,” INFORMS Annual Conference, Phoenix, Az, October 15-18 (Poster Speaker: Sadat and Min).

Min, K. J., C. MacKenzie, and Z. Zhao, 2022, “Decision Support for Integrated Electricity and Natural Gas System Planning under Uncertainties: A Real Options Approach,” Iowa Energy Summit, Altoona, IA, November 8-9 (Speaker: Min and Zhao).

Zhao, Z. and K. J. Min, 2022, “Decision Support for Transition from a Conventional Roof to a Cool Roof under Energy Price Uncertainties: A Real Option Approach,” INFORMS Annual Conference, Indianapolis, IN, October 16-19 (Speaker: Zhao).

Ghodke, J., C. MacKenzie, and K. J. Min (In Person Speaker: Ghodke), “The Engineering Economic Valuation of Option to Expand Transmission Network,” Invited Poster Session, Iowa Energy Summit, Altoona, IA, November 2021.

Nur, G. N., C. MacKenzie, and K. J. Min (In Person Speaker: Nur), “Evaluating the Option Value of Adding a Generator under Demand Uncertainty: A Real Option Approach,” Invited Poster Session, Iowa Energy Summit, Altoona, IA, November 2021.

Zhao, Z., J. Jackman, and K. J. Min (Speaker: Zhao), “Decision Support On Road Resurfacing Under Maintenance Cost Uncertainty,” INFORMS Annual Conference, Online, October 2021.

Ghodke, J., G. N. Nur, C. MacKenzie, and K. J. Min (Speaker: Ghodke and Nur), “Valuation of an Option to Expand Generation and Transmission Capacities under Demand Uncertainty,” INFORMS Annual Conference, Online, October 2021.

Ghodke, J., C. MacKenzie, and K. J. Min (Speaker: Ghodke), “Electric Power Planning for a Transmission Network under Demand Volatility,” Industrial and Systems Engineering Conference, Online, May 2021.

Min, K. J. and Z. Zhao (Speaker: Zhao), “Decision Making on Highway Construction in the Arctic Area Using Private-Public Partnership under Uncertainties,” INFORMS Annual Conference, Online, November 2020.

Min, K. J., J. Jackman, and Z. Zhao (Speaker: K. J. Min), “Infrastructure Decisions and Policies under Uncertainties in Arctic Regions,” INFORMS Annual Conference, Seattle, WA, October 2019.

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Min, K. J., J. Jackman, F. Niayeshpour, and Z. Zhao (Speaker: K. J. Min), “Blockchain Valuation for Supply Chains,” Industrial and Systems Engineering Conference, Orlando, FL, May 2019.

Min, K. J., J. Jackman, F. Niayeshpour, and Z. Zhao (Speaker: K. J. Min), “Engineering Economic Valuation of Blockchain Technology for Petroleum Industry Supply Chain Under Uncertainty,” INFORMS Annual Conference, Phoenix, AZ, November 2018.

Min, K. J., J. Jackman, G. Kremer, F. Niayeshpour, and Z. Zhao (Speaker: K. J. Min), “Valuation of Design Changeability in Transportation Vehicles and Infrastructures under Uncertainties,” Industrial and Systems

Engineering Conference, Orlando, FL, May 2018.

Min, K. J., J. Jackman, Cameron MacKenzie (Speaker: K. J. Min), “Engineering Economy Courses for ABET Student Outcome Assessments and Program Educational Objective Reviews,” Industrial and Systems Engineering Conference, Orlando, FL, May 2018.

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Croghan, J., K. J. Min, and J. Jackman, 2017, (Speaker: J. Croghan), “Estimation of Geometric Brownian Motion Parameters for Oil Price Analysis,” Industrial and Systems Engineering Conference, Pittsburgh, PA.

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C. Wang and K. Jo Min, (Speaker: C. Wang), “Fuel Hedging Strategy for Electric Power Utilities, INFORMS Annual Conference, Philadelphia, PA, November 2015.

C. Lou, K. J. Min, and C. Wang, (Speaker: K. J. Min) “Renewable Power Plant Repowering Under Cost and Policy Uncertainties,” IIE Annual Conference and Expo, 5/30/15-6/2/15, Nashville, Tennessee.

F. Kucuksayacigil and K. J. Min (Speaker: K. J. Min), “Expansion Planning for Transmission Network under Demand Uncertainty: A Real Options Framework,” IIE Annual Conference and Expo, 5/30/15-6/2/15, Nashville, Tennessee.

C. Wang and K. Jo Min, (Speaker: K. Jo Min), “Fuel Hedging Strategy for Electric Power Utilities: Industry Project In Progress,” INFORMS Annual Conference, San Francisco, CA, November 2014.

C. Wang and K. Jo Min, (Speaker: K. Jo Min), “Policies on National Stockpile for Rare Earth Elements: A Real Options Approach,” IIE Annual Conference and Expo, 5/31/14-6/3/14, Montréal, Canada.

K. Jo Min and Wenbo Shi, (Speaker: K. Jo Min), “Contract Valuation in a Supply Chain of Rare Earth Elements,” IIE Annual Conference and Expo, 5/31/14-6/3/14, Montréal, Canada.

“Government Incentive Policy for Renewable Power Producers,” with C. Wang (Speaker: K. Jo Min), INFORMS Annual Conference, Minneapolis, MN, October 2013.

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“Curriculum Continuous Improvement Process through Objectives and Outcomes,” with Jackman and Gemmill (Speaker: Min), IIE Annual Conference and Expo, Orlando, Florida, May, 2012.

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Approach,” with Wang (Speaker: Wang), IIE Annual Conference and Expo, Orlando, Florida, May, 2012.

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“Objectives, Outcomes, and Continuous Improvement Process in a BSIE Curriculum,” with Jackman and Gemmill (Speaker: Min), IIE Annual Conference and Expo 2011, Reno, Nevada, May, 2011.

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“Objective Evaluation, Outcome Assessment, and the Continuous Improvement Process,” with Gemmill, Jackman, and Popejoy-Sheriff (Speaker: Min), Accreditation Issues in OR/MS Education Session, INFORMS Annual Conference, Austin, Texas, November 2010.

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"A Multinational Student Team Project for Global Supply Chain Models," with Ball, Cardenas-Barron, Chen, and Jackman, Industrial Engineering Research Conference, Orlando, Florida, May 2006 (Speaker: Min).

Min, K. J. and P. Patterson, "Access Technology-Oriented Assessment Of Telemedicine In Small And Medium-Sized Communities," International Conference on Aging, Disability and Independence, St. Petersburg, Florida, January 2006 (Speaker: Min).

Min, K. J., P. Ball, L. Cardenas-Barron, C. Chen, and J. Jackman, "A Global Supply Chain Project by International Student Teams, INFORMS Annual Meeting, New Orleans/San Francisco, November 2005 (Speaker: K. J. Min).

Min, K. J. and S. Malladi, "E-Government in Rural Communities: Issues and Trends," National Conference on Digital Government Research, Seattle, Washington, May 2004. (poster presentation by Min).

Bandyopadhyay, A., Sulakhe, S., Malladi, S., Rao, V., Lakshminarasimhan, K., and Min, K. J., "Allocation and Inventory Policies for Reels in Printed Circuit Board Assemblies," Annual Industrial Engineering Research Conference, Portland, Oregon, May 2003.

Min, K. J., Sukhumaran, B., Varghese, S., and Sulakhe, S., "Internet Based Economic Development for Rural Communities- Decisions and Strategies," Economic Development Administration (US Department of Commerce) Regional Conference, Chicago, Illinois, May 2002 (Invited

Speaker: Min).

Min, K. J. and Sukhumaran, B., "Supply Chain Extension: Second Sourcing," Research Seminar, Industrial Engineering Department, Monterrey Institute of Technology, Toluca, Mexico, November 2002 (Invited Speaker: Min).

Min, K. J., "Inventory, Setup Reduction, and Quality Improvement under Return on Investment Maximization," Multi-Campus Research Seminar, Industrial Engineering Department, Monterrey Institute of Technology, Toluca, Mexico, November 2002.

Min, K. J., "Inventory/Production Systems: The Case of Return on Investment and Quality Improvement," Research Seminar, Industrial Engineering Department, Monterrey Institute of Technology, Toluca, Mexico, November 2002.

Min, K. J. and Wang, C., "Discrete Real Options Models for Inter-Related Generation Projects," Annual Industrial Engineering Research Conference, Orlando, Florida, May 2002 (Co-Speakers: Min and Wang).

Ryan, S., Gemmill, D., Jacobson, D., Min, K. J., Olafsson, S., Qamhiyah, A. and Stuart, J., "A Scalable and Secure E-Commerce Hub for Electronics Recycling," Scalable Enterprise Systems Workshop, Dallas, Texas, May 2001 (Speaker: Ryan).

Wang, C. and Min, K. J., "A Discrete Options Model for Three Inter-Related Generation Planning Projects," Tenth Industrial Engineering Research Conference, Dallas, Texas, May 2001 (Co-Speakers: Min and Wang).

Olafsson, S., Min, K. J., Subramaniam, G., Sulakhe, S., Varghese, S., and Yang, J., "Internet-Based Management and Archival System for Recyclable Products," Tenth Industrial Engineering Research Conference, Dallas, Texas, May 2001 (Speaker: Olafsson).

Ryan, S., Gemmill, D., Jacobson, D., Min, K. J., Olafsson, S., and Qamhiyah, A., "Market-Based Scalable Recycling System," Scalable Enterprise Systems Grantees Workshop, 2001 NSF Design, Service and Manufacturing Grantees Conference, Tampa, Florida, January 2001 (Speaker: Ryan).

Min, K. J. and Wang, C., "A Real Options Model for Multiple Inter-

Related Generation Projects,” INFORMS Conference, San Antonio, Texas, November 2000 (Co-Speakers: Min and Wang).

Min, K. J. and Wang, C., "Valuing Inter-Related Generation Planning Projects: A Real Options Approach," INFORMS Conference, Salt Lake City, Utah, May 2000 (Speaker: Wang).

Wang, C. and Min, K. J., “Generation Planning for Electric Utilities Based on Real Options,” Ninth Industrial Engineering Research Conference, Cleveland, Ohio, May 2000 (Speaker: Min).

Wang, C. and Min, K. J., “Valuing Generation Planning Projects for Electric Utilities Based on Real Options,” American Power Conference, Chicago, Illinois, April 2000 (Co-Speakers: Min and Wang).

Wang, C. and Min, K. J., "Generation Planning Model – A Real Options Approach," INFORMS Conference, Philadelphia, Pennsylvania, November 1999 (Speaker: Wang).

Subramaniam, P. S. and Min, K. J., "Divisionalization Study for a Symmetric Oligopoly," INFORMS Conference, Cincinnati, Ohio, May 1999 (Speaker: Min).

Wang, C. and Min, K. J., "Generation Expansion Planning for Electric Utilities under Price Uncertainties," INFORMS Conference, Cincinnati, Ohio, May 1999 (Speaker: Wang).

Wang, C. and Min, K. J., "Generation Expansion Planning for Electric Utilities Under Uncertainties: Profitability versus Risk," Industrial

Engineering Research '99 Conference, Phoenix, Arizona, May 1999 (Co-Speakers: Min and Wang).

Otake, T, Min, K. J., and Chen, C., “Inventory and Investment in Setup Operations under Profit and ROI Maximization,” the Seventh Industrial Engineering Research Conference, May 1998, Banff, Canada (Speaker: Min).

Otake, T. and Min, K. J., “Inventory and Investment in Quality Improvement under ROI Maximization,” INFORMS/CORS Conference, April 1998, Montreal, Canada (Speaker: Otake).

Min, K. J., “A Productivity Study on Seed Plant Operation and Staffing,”

Leadership Team Meeting, Pioneer Hi-Bred International, Inc., February 1998, Johnston, Iowa.

Otake, T., Min, K. J., and Chen, C., "Inventory and Investment in Setup Cost Reduction under Return on Investment Maximization," INFORMS Conference, October 1997, Dallas, Texas (Speaker: Min).

Otake, T. and Min, K. J., "Inventory and Pricing Policies for a Duopoly of Complements," the Sixth Industrial Engineering Research Conference, May 1997, Miami Beach, Florida (Speaker: Min).

Otake, T. and Min, K. J., "Inventory and Pricing Policies for a Duopoly of Substitute Products," the Fifth Industrial Engineering Research Conference, May 1996, Minneapolis, Minnesota (Co-Speakers: Min and Otake).

Chen, C. and Min, K. J., "An Inventory Model with Setup Operations Investment," INFORMS Conference, October 1995, New Orleans, Louisiana (Speaker: Min).

Chen, C. and Min, K. J., "Inventory and Disposal Policies in Response to a Sale," INFORMS International Conference, June 1995, Singapore (Speaker: Min).

Soesilo, D. and Min, K. J., "A Setup Reduction Model for Profit Maximizing Lot-Size Firms," ORSA/TIMS Conference, October 1994, Detroit, Michigan (Speaker: Min).

Hung, T. and Min, K. J., "Priority Allocation of Semiconductor Products with the Minimum Number of Deliveries Guaranteed," the Third Industrial Engineering Research Conference, May 1994, Atlanta, Georgia (Speaker: Min).

Chen, C. and Min, K. J., "Optimal Inventory and Disposal Policies under Price Changes," TIMS/ORSA Conference, April 1994, Boston, Massachusetts (Speaker: Min).

Chen, C., Hung, T., Yao, M., and Min, K. J., "Inventory Policies with Disposal Options When Prices Change - Preliminary Findings," ORSA/TIMS Conference, November 1993, Phoenix, Arizona (Speaker: Min).

Min, K. J., "Competitive Inventory and Pricing Policies," TIMS/ORSA

Conference, May 1993, Chicago, Illinois.

Min, K. J. "On Monopolistic and Competitive Inventory and Quantity Discount Pricing Policies," Department of Applied Economics, Université Laval, December 1992, Quebec, Canada.

Min, K. J. and Oren, S. S., "Pricing Specification Levels and Allocation Priorities of Semiconductor Products," ORSA/TIMS Conference, November 1992, San Francisco, California (Speaker: Min).

Min, K. J., "Improving Economic Efficiencies - An Operations Research/Operations Management Approach," Solid State Electronics Center, Honeywell, Inc., September 1992, Plymouth, Minnesota.

Min, K. J., "Monopolistic Quantity Discount Pricing Policies for EOQ Models," TIMS/ORSA Conference, April 1992, Orlando, Florida.

Min, K. J., "Product Positioning in a Duopoly," ORSA/TIMS Conference, October 1990, Philadelphia, Pennsylvania.

X. GRADUATE STUDENTS

Ph.D.

Sadat Mohammad Ahnaf (ISU Teaching Excellence Award, Fall 2023), Fall 2024 expected.

Gazi Nazia Nur (IMSE Research Symposium: 3rd Best Graduate Poster Award, Spring 2022), Fall 2024 expected.

Zhuoyi Zhao (ISU Research Excellence Award, Fall 2022)
IMSE Honors and Awards: Best Graduate Poster Award, Spring 2021;
Best Graduate Poster and Presentation Award, Spring 2020; Overall Best Presentation Award, Spring 2019), Spring 2023.

Fikri Kucuksayacigil, Spring 2018, (ISU Research Excellence Award; ISU Teaching Excellence Award)

Chenlu Lou, Spring 2014 (ISU Research Excellence Award)

Wenbo Shi, Summer 2013 (ISU Research Excellence Award and ISU Teaching Excellence Award)

Karla Valenzuela, Fall 2009

Shantha Daniel, Spring 2009

Sasidhar Malladi, Fall 2007 (ISU Research Excellence Award)

Jie Li, Fall 2006

Chung-Hsiao Wang, Spring 2001 (ISU Research Excellence Award)

Toshitsugu Otake, Summer 1998 (ISU Research Excellence Award)
Cheng-Kang Chen, 1995 (ISU Research Excellence Award)

M.S.

Blake Clark, Spring 2023.
Jay Ghodke, Spring 2022.
Farshad Niayeshpour, Summer 2019
Chenlu Lou, Spring 2011
Shi Peng, Fall 2010
Wen Lin, Fall 2008
Kil Jin Lee, Fall 2008
Nicholas Kuennen: Summer 2007
Mario Lukito: Fall 2005
Liew Kar-Yeng: Fall 2005
Abhishek Bandyopadhyay: Summer 2005
Viveck Rao: Fall 2004
Sachin Sulakhe: Fall 2004
Sasidhar Malladi: Summer 2004
Balaji Sukhumaran: Fall 2002
Siju Varghese: Spring 2002
Siddarth Rao: Summer 2000
Linfy Hidajat: Spring 2000
Pazhayanur-Shanmukham Subramaniam: Summer 1998
Chung-Hsiao Wang: Spring 1997
Hyung-Jin Son: Spring 1997
Hoon Jung: Spring 1997
Djoko Soesilo: Spring 1995
Ming-Jong Yao: Spring 1994
Cheng-Kang Chen: Spring 1993
Peitsang Wu: Spring 1992

M.E.

Romy Cahyadi: Fall 1999 (Systems Engineering)
Angela Volkmann: Fall 1994

XI. EXTENSION AND OUTREACH

ABET Program Evaluator/Observer:

Evaluator: Industrial Engineering Program, 2023-2024.

Evaluator: Industrial Engineering Program, 2022-2023.

Evaluator: Industrial Engineering Program, 2021-2022 – 2 Visits (1

Domestic and 1 International; both visits were virtual)

Evaluator: Industrial Engineering Program, 2019-2020.

Evaluator: Industrial Engineering Program, 2017-2018.

Evaluator: Industrial Engineering Program, 2016-2017.

Evaluator: Industrial Engineering Program, 2015-2016.

Evaluator: Industrial Engineering Program, 2014-2015.

Evaluator: Industrial Engineering Program, 2013-2014.

Evaluator: Industrial Engineering Program, 2012-2013.

Evaluator: Industrial Engineering Program, 2011-2012.

Evaluator: Industrial Engineering Technology Program, 2010-2011.

Evaluator: Industrial Engineering Program, 2009-2010.

Evaluator: Industrial Engineering Program, 2007-2008.

Observer: Industrial Engineering Program, 2006-2007.

International Research/Teaching Collaboration:

Worked with Dr. Trigos of MIT-Toluca on the components sharing problem of production assembly lines. This resulted in an M.S. thesis with honor at MIT-Toluca in December 2003. The thesis committee included myself as well as Dr. Barnes of Georgia Tech.

Visit to Community College for Collaboration Discussion

Northwest Iowa Community College, Sheldon, Iowa, December 13, 2016.

Northwest Iowa Community College, Sheldon, Iowa, November 10, 1999.

XII. SERVICE AND PROFESSIONAL ACTIVITIES

Undergraduate Research Advisor:

**Samantha Bradley and Eli David Sallis, Fall 2023-Spring 2024,
Facility Decisions for Carbon and Energy Storage, IMSE
Undergraduate Research Assistantship Program (IMSE Research
Symposium 2024: Undergraduate Best Poster First Prize with**

Jackman, Co-Advisor, Sadat & Nur as PhD Student Mentors).

Samantha Bradley and Alexander Hoffmeister, Fall 2022-Spring 2023, Remanufacturing and Recycling Decision Support Systems, IMSE Undergraduate Research Assistantship Program.

Mason Ekblad, Al-Araidah, Mohammad, and Sierra Kostinec, Fall 2021~Spring 2022, Remanufacturing Design under Carbon Emission Reduction, IMSE Undergraduate Research Assistantship Program and Slater Fellowship.

Melia Finn, Elizabeth Clow, and Vaidehee Bahirat, Spring 2021, Remanufacturing Design under Carbon Emission Reduction, IMSE Undergraduate Research Assistantship Program and Slater Fellowship.

Maeve McCloskey and Vaidehee Bahirat, Summer~Fall 2020, Electric Power Planning, IMSE Undergraduate Research Assistantship Program

Omar Alqattan and Owen Blake, Incentive Account, Fall 2019.

Maeve McCloskey and Ashley Sackpraseuth, co-advising with J. Jackman, IMSE Undergraduate Research Assistantship Program, Fall 2019~Spring 2020.

Kennedy Cook and Erik Zeller, IMSE Learning and Teaching Small Grant, Summer 2019.

Eric Sesterhenn, co-advising with J. Jackman, IMSE Undergraduate Research Assistantship Program, Spring 2019.

Zahira Mella, Wesley Nelson, Ethan Bass, and John Sheriff, with John Jackman as Co-Advisor, NSF Supplementary REU on Visualization Aids for Education of Decision Making in Complex Projects, Summer 2018.

Joe Eilers, Central College, ISU REU program in Wind Energy Science, Engineering and Policy (WESEP), Summer 2017.

Connor Theisen, co-advising with G. Kremer, Iowa State University, IMSE Undergraduate Research Assistantship Program, Spring 2017 (Winner, Best Poster Award – IMSE URA Symposium April 2017).

Haley Beving, co-advising with J. Jackman, Iowa State University, IMSE Undergraduate Research Assistantship Program, Spring 2017.

Laura Lilienkamp, Smith College, ISU REU program in Wind Energy Science, Engineering and Policy (WESEP), Summer 2016.

Omar Elsayaf, co-advising with J. Jackman, Iowa State University, IMSE Undergraduate Research Assistantship Program, Fall 2016.

Jakob Croghan, co-advising with J. Jackman, Iowa State University, IMSE Undergraduate Research Assistantship Program, Fall 2016.

Seminars/Workshops Presented or Organized:

The Second Public Workshop for Solar and Wind Energy Using Engineering Economic Theory, with C. MacKenzie, on ISU Campus, August 2022.

Public Workshop for Solar and Wind Energy Using Engineering Economic Theory, with C. MacKenzie, on ISU Campus, August 2021.

Taught a short course on Sustainable Production Systems in Monterrey Institute of Technology, Toluca, summer 2006.

With Jackman, Ryan, and Patterson, organized a workshop on Citizen-Based Assessment and Improvement of E-Government Services for citizen groups' leaders, government officials, and IT experts from Webster City, Grinnell, and Mount Pleasant, as well as Platteville, Wisconsin, and Iola, Kansas, in March 2006.

IMSE Environmentally Sustainable Engineering Research Initiative - Organized industry workshop on Creating Competitive Advantage through Environmentally Sustainable Engineering, with S. Ryan, September 2005.

"Supply Chain Design and Analysis," BioEconomy Working Group Meeting, Nevada, Iowa, January 2004, (with Olafsson and Ryan).

"Overview of Research Activities on Manufacturing and Logistics in Industrial and Manufacturing Systems Engineering Department at Iowa State University," The Third Midwest Roundtable on Manufacturing and Logistics, October 1996, Urbana-Champaign, Illinois (Co-Speakers: K. J. Min and J. Jackman).

Guest Editor (2013-2016), with J. Saphores and V. Thomas

The Engineering Economist, Special Issue on Engineering Economics and Sustainable Systems, in the areas of Energy

Systems and Production Systems. “Introduction: Special Issue on Engineering Economics and Sustainable Systems,” Editorial, Vol. 61, pp. 161–162, 2016.

Editorial Review Board and Area Editor

International Journal of Information Systems in the Service Sector (2007-present)

Area Editor, Real Options Analysis, The Engineering Economist, (2017-late May 2023)

International Journal of Information & Decision Sciences (2008-2010)

International Journal of Operations and Quantitative Management (1994-2009)

Computers and Operations Research (2003-2004)

Guest Lecturer

WESEP 502, Wind Energy Systems, at ISU (3 lectures) in Fall 2021, Fall 2015, Spring 2014, 2013.

Advisory Board Member:

Center for Excellence in Learning and Teaching, Fall 2008-Spring 2011.

“21st Century National Energy and Transportation Infrastructures for Balancing Environmental Impacts, Costs, and Resiliency,” a project funded by NSF (PI: McCalley) 2008-2011.

Panel Member/Chair:

National Science Foundation, Panel Review Member, Research Initiation Grant in Engineering Education, Arlington, Virginia, June 2012.

National Science Foundation, Review Panel Chair, Scholarships in Science, Technology, Engineering, and Mathematics, Arlington, Virginia, September 2011.

National Science Foundation, Panel Review Member, Transforming Undergraduate Education in Science, Technology, Engineering and Mathematics (TUES) Type 1, Arlington, Virginia, July 2011.

National Science Foundation, Panel Review Member, Scholarships in Science, Technology, Engineering, and Mathematics, Arlington, Virginia, September 2010.

National Science Foundation, Panel Review Member, Scholarships in Science, Technology, Engineering, and Mathematics, Arlington, Virginia, November 2009.

National Science Foundation, Panel Review, Manufacturing Enterprise Systems, Arlington, Virginia, May 2008.

National Science Foundation, Panel Review, Course, Curriculum, and Laboratory Improvement, Arlington, Virginia, July 2008.

National Science Foundation, Panel Review Member, Scholarships in Science, Technology, Engineering, and Mathematics, Arlington, Virginia, October 2008.

Panel Review, SBIR/STTR Phase I, Power Systems, NSF, Washington D.C. March 2007

Prevention of Significant Deterioration (PSD) Economics Taskforce, Air Quality Bureau, Department of Natural Resources (1998-1999)

Discussion Group, Focus on Areas for INFORMS Opportunity, INFORMS Conference, October 1997, Dallas, Texas.

Panel Review, Unsolicited Proposals, Program of Production Systems, Division of Design, Manufacture and Industrial Innovation, Directorate of Engineering, National Science Foundation, November 1995, Washington D.C.

On policies and directions of International Journal of Operations and Quantitative Management, INFORMS International Conference, June 1995, Singapore.

Engineering Education Track Co-Chair (2016-2017)

With Jackman for IISE 2017 (Pittsburgh, PA, May 2017).

Energy Track Co-Chair (2010-2011)

With Jackman and Ryan for IERC 2011 (Reno, Nevada, May 2011).

Area Editor (1994)

In the areas of Inventory, Mathematical Programming, and Resource Utilization for Proceedings of the Third Industrial Engineering Research Conference, Institute of Industrial Engineers.

Session Chair/Moderator:

INFORMS Session Chair, "Optimization and Aviation," Seattle, WA, October 2019.

INFORMS Session Chair, "Economic Modeling," Phoenix, AZ, November 2018.

ISERC Session Chair, "Course Planning and Experiences," Anaheim, CA, May 2016.

INFORMS Session Chair, "Energy IV: Renewable Energy and Environment," Minneapolis, MN, October 2013.

ECSEE Session Chair, "Interdisciplinary," Brighton, U.K., July 2013.

ISERC Session Chair, "Clean Energy & Renewables-II," San Juan, Puerto Rico, May 2013.

INFORMS Session Chair, "Supply Chain, Closed-loop II," Austin, Texas, November 2010.

INFORMS Session Chair, "Green Supply Chain Management," San Diego, California, October 2009.

INFORMS Session Chair, "Investment and Hedging Strategies," Washington DC, October 2008.

INFORMS Session Chair, "Internationalizing Experiences in Teaching and Learning," Washington DC, October 2008.

IERC Session Chair, "Outcome-Based Teaching and Learning,"

Vancouver, British Columbia, Canada, May 2008.

Session Organizer: Outcome-Based Teaching and Learning, Education Track, Industrial Engineering Research Conference, VanCouver, British Columbia, May 2008

Session Chair: Capacity and Inventory Session, INFORMS, Seattle, Washington, November 2007

Session Organizer: Birds of a Feather Session: Citizen-Based Assessment and Improvement of E-Government Services, with Jackman, Patterson, and Ryan (Moderators: Jackman and Min) dg.o 2007, Philadelphia, Pennsylvania, May 2007

Session Chair: Applied Optimization Session, Industrial Engineering Research Conference, Houston, Texas, May 2004.

Moderator: Session on “Internet-Based Public Policy Participation for Rural Community Citizens,” National Conference on Digital Government Research, Seattle, Washington, May 2004.

Engineering Management Session, Annual Industrial Engineering Research Conference, Orlando, Florida, May 2002.

Internet and E-Commerce Session, Tenth Industrial Engineering Research Conference, Dallas, Texas, May 2001.

Industry Applications I Session, INFORMS Conference, San Antonio, Texas, November 2000.

Applied Optimization Session, Ninth Industrial Engineering Research Conference, Cleveland, Ohio, May 2000.

Strategic Planning Session, INFORMS Conference, Cincinnati, Ohio, May 1999.

Inventory Session, the Seventh Annual Industrial Engineering Research Conference, May 1998, Banff, Canada.

Strategic Cost Analysis Session, INFORMS Conference, October 1995, New Orleans, Louisiana.

Inventory Models Session, ORSA/TIMS Conference, October

1994, Detroit, Michigan.

Costing Session, the Third Industrial Engineering Research Conference, May 1994, Atlanta, Georgia.

Tenure Reviewer:

Assistant Professor, Industrial and Manufacturing Engineering, University of Wisconsin-Milwaukee, 2013.

Another Assistant Professor, Industrial and Manufacturing Engineering, University of Wisconsin-Milwaukee, 2005.

Assistant Professor, on behalf of Department of Industrial Engineering, Pohang University of Science and Technology, 2001.

Journal/Proceedings Referee:

The Engineering Economist, 1994, 2004, 2007, 2011, 2012, 2013, 2015, 2016.

Proceedings Referee, ISERC, Nashville, Tennessee, May/June 2015.

IEEE Transactions on Engineering Management, 2011, 2012, 2013, 2014.

The Engineering Economist, 1994, 2004, 2007, 2011, 2012, 2013. IEEE Transactions on Power Systems, 2013.

Proceedings Referee, ISERC, San Juan, Puerto Rico, May 2013

Proceedings Referee, ISERC, Orlando, Florida, May 2012

Proceedings Referee, IERC, Reno, Nevada, May 2011

OMEGA - The International Journal of Management Science, 2010

Proceedings Referee, IERC, Vancouver, British Columbia, Canada, May 2008.

Proceedings of American Society for Engineering Education Conference, 2005

Manufacturing & Service Operations Management, 2004

Proceedings of the Annual Industrial Engineering Research Conference, 1994, 1995, 1996, 2001, 2003, 2006

Computers and Operations Research, 2002, 2001, 2000, 1999, 1998, 1997

Computers & Mathematics, 2002

International Transactions in Operational Research, 2001

Annals of Operations Research, 2000

International Journal of Systems Science, 2000

Production Planning & Control, 1999

IIE Transactions - Special Issue on Supply Chain Coordination and Integration, 1996, 1995
ASME Journal of Manufacturing Science and Engineering, 1997, 1996
IIE Transactions - Scheduling and Logistics, 1993
IIE Transactions - Design and Manufacturing, 1995
Management Science, 1997, 1994, 1993
Journal of the Operational Research Society, 1995
IEEE Transactions on Reliability, 1994
International Journal of Production Economics, 1995, 1994
Journal of Intelligent Manufacturing, 1994.
Computers and Industrial Engineering, 1997, 1995-1993, 1990, 2004
International Journal of Management and Systems, 1993
Applied Engineering Education, 1990.

Textbook Proposal Reviewer:

“Capital Expenditure Decisions for Corporate and Public Projects,”
Proposed by Randhawa, Tanchoco, and Bedworth for McGraw-Hill, 1999.

Conferences/Workshops/Seminars attended:

2024 ABET Symposium, Tampa, FL, April 2024.

National Effective Teaching Institute - Online (NETI-3), June 2020.

2019 MIT Energy Conference, Cambridge, MA, April 2019.

2019 ABET Symposium, Dallas, TX, April 2019.

2018 MIT Energy Conference, Cambridge, MA, March 2018.

“Data Visualization: Conveying Information through Visual Representations,” a two-day course, Harvard University, MA, June 2016.

ABET Workshop, IIE Annual Conference and Expo 2016, Anaheim, CA, May 2016.

Big Data Finance 2016, New York University, NY, May 2016.

All Energy 2016, Glasgow, United Kingdom, May 2016.

2016 ABET Symposium, Hollywood, Florida, April 2016.

NSF Sponsored Engineering Design and Systems Engineering Foundations Workshop, Clemson University, South Carolina, November 2015.

ABET Workshop, IIE Annual Conference and Expo 2015, Nashville, Tennessee, May 2015.

2015 ABET Symposium, Atlanta, Georgia, April 2015.

DMDII 15-02 TO 15-07 PROJECT LAUNCH WORKSHOP, Atlanta, Georgia, February 2015.

ASEE Sunday Workshop: Beyond the Survey: Utilizing Alternative Inquiry Methods, Indianapolis, IN, June 2014.

ABET Workshop, IIE Annual Conference and Expo 2014, Montreal, Canada, June 2014.

All Energy 2014, Aberdeen, United Kingdom, May 2014.

2014 ABET Symposium, Pittsburgh, PA, April 2014.

Military Operations Research Society (MORS) Professional Development Workshop: Building Government and Industry Relations, Arlington, VA, March 2014.

2014 MIT Energy Conference, Cambridge, MA, February 2014.

Workshop: Substitution of Critical Raw Materials – Importance for European Industry, The Critical Raw Materials Innovation Network (CRM_InnoNet) of European Union, Warsaw University of Technology, Poland, September 2013.

Critical and Strategic Materials (CSM) Workshop, Cranfield University, Cranfield Bedfordshire, U.K., July 2013.

ABET Workshop, IIE Annual Conference and Expo 2013, San Juan, Puerto Rico, May 2013.

ABET Workshop, IIE Annual Conference and Expo 2012, Orlando, Florida, May 2012.

ABET Workshop, IIE Annual Conference and Expo 2011, Reno, Nevada, May 2011.

ABET Workshop, IIE Annual Conference and Expo 2009, Miami, Florida, May/June, 2009.

“Connecting Student Learning Outcomes to Teaching, Assessment, Curriculum,” Workshop by Institute for Educational Outreach, Alverno College, Milwaukee, Wisconsin, June 2007.

Teaching Effectiveness Colloquium at INFORMS Annual Meeting, Pittsburgh, November 2006.

Green Engineering Educators Workshop at American Society for Engineering Education Conference, Portland, Oregon, June 2005.

NSF Symposium on Supply Chain Management in Process Industries, Minneapolis, Minnesota, May 2004.

IIE Program Evaluator Training for ABET, Houston, Texas, May 2004.

ABET Training Faculty Workshop Version 2.0, ABET Commission Summit, and Annual ABET Meeting, Minneapolis, Minnesota, October, 2003.

26th National Rural Health Association Annual Conference, Salt Lake City, Utah, May 2003.

Best Assessment Processes V Training, Rose-Hulman Institute of Technology, Terre Haute, Indiana, April 2003.

“Third International Workshop on Advanced Issues of E-Commerce and Web-Based Information Systems,” Milpitas, California, June 2001.

“Building Bridges VII Research Conference: Assessing Policy Decisions and Their Impact on Health Care Delivery,” by American Association of Health Plans & Agency for Healthcare Research and Quality, Seattle, Washington, April 2001.

“Graduate Education at a 21st-Century Land-Grant University,”
the Fourth Annual Faculty Conference of Iowa State University,”
Grinnell, Iowa, March 1996.

Professional Society Memberships:

IIE (Institute of Industrial Engineering; 1993-present)

**INFORMS (Institute for Operations Research and the
Management Sciences; 1995-present)**

ASEE (American Society for Engineering Education; 2003-
2009; 2014; 2016)

ORSA (Operations Research Society of America; 1987-1994)

TIMS (The Institute of Management Science; 1990-1994)

Accreditation Efforts for BSIE Program at IMSE

Coordinated and wrote major portions of 2018 Self-Study for IE Program

Coordinated and wrote major portions of 2012 Self-Study for IE Program

Coordinated and wrote major portions of 2006 Self-Study for IE Program

XIII. UNIVERSITY ACTIVITIES

University Committees:

Annuities and Insurance Committee 1995-1998

Liaison - ISU Water Resources Research Institute, 1992-1999

Transportation Planning Coordinating Committee, 1992-1999

College Committees:

Undergraduate Program Leadership, 2019-2023

ABET Continuous Improvement, 2019-2021

Engineering College Curriculum, 2003-2021

IMSE Chair Search Committee, Fall 2015-2016

Student Learning Task Force, 2004-Spring 2009

Coop/Intern Task Group, 2003-2008

Academic Quality Management 2002-2004

Professional Development 2001-2004

Honors and Awards 2001-2004

Faculty Development 1998-2000

IMSE DEO Evaluation 1999

Department Committees

ABET Advisor to BSIE Program, 2023-present

Curriculum, Assessment and Standards, 1999-present,

Chair (2000-2023)
Academic Advisor(s) Search Committee, Fall 2016
IMSE Chair Evaluation Committee, Spring 2015
Academic Advisor(s) Search Committee, Fall 2015
Secretary III Search Committee, Fall 2015
Space, Facilities Planning, and Educational Resources,
2001-2010
Faculty Search Committee, 2002-2003, 1992-1998, 1990-1991
Undergraduate and Graduate Seminars, Chair 1999
Graduate Committee, 1991-1999
Curriculum Committee, 1991-1992
Alumni Relations Committee, 1996-1997
Educational Resources, Computer Policy and Planning Committee,
1990-1991

Faculty Advisor for Student Societies, Clubs, and other Activities:

Faculty Advisor, INFORMS ISU Student Chapter, 1997-present. * It won INFORMS Student Chapter Annual Award Cum Laude 2023.

It won INFORMS Student Chapter Annual Award Honorable Mention 2022.

It won INFORMS Student Chapter Annual Award Cum Laude 2021

Faculty Advisor, ISU Korean Student Association, 1998-1999
Undergraduate Research Assistant, Andres Pereira (stipends to advisee and advisor by Research Careers for Minority Scholars (RCMS) Program, Iowa State University, Summer, 1995).