

**CHERYL GAIMON**  
Scheller College of Business  
Georgia Institute of Technology  
800 W. Peachtree St., NW  
Atlanta, Georgia 30308  
cheryl.gaimon@scheller.gatech.edu

**June 3, 2019**

**EDUCATION**

- Ph.D. Operations Management/Operations Research, Graduate School of Industrial Administration, Carnegie Mellon University.
- M.S. Industrial Administration: Operations Management, Graduate School of Industrial Administration, Carnegie Mellon University.
- B.S. Mathematics and Economics (Magna Cum Laude), Brooklyn College, City University of New York.

**EMPLOYMENT**

- May 2013 – present Esther and Edward Brown Chair, Georgia Institute of Technology
- July 2005 - present Regents Professor, Georgia Institute of Technology
- March 1999 - present Director, Management of Technology Certificate Program, Georgia Institute of Technology
- August 2014 – August 2015 Area Coordinator for Operations Management, Scheller College of Business, Georgia Institute of Technology.
- August 2007 - 2012 Richard and Carol Kalikow Professorship, Georgia Institute of Technology
- September 1991 – June 2005 Full Professor, College of Management, Georgia Institute of Technology
- June 1988 - June 1995 Area Coordinator of Operations Management, College of Management, Georgia Institute of Technology
- June 1988 - August 1991 Associate Professor, College of Management, Georgia Institute of Technology
- September 1987 - May 1988 Associate Professor (with Tenure), College of Business, The Ohio State University
- September 1981 - August 1987 Assistant Professor, College of Business, The Ohio State University

## CURRENT RESEARCH AND TEACHING INTERESTS

Research interests are in the domain of innovation and management of technology including the planning of knowledge-based resource capabilities to improve competitive performance.

- (i) Knowledge outsourcing for scientific, engineering, analytical, and technical expertise (buyer and supplier games; single and multiple buyers or suppliers)
- (ii) Knowledge management (knowledge development, transfer, and depreciation)
- (iii) Strategic alliances for external knowledge sourcing (between competitors and non-competing firms)
- (iv) Selection and implementation of new technology (workforce integration; dynamic forces and uncertainty; incentives)
- (v) Knowledge management for new product development (NPD) (investments in radical versus incremental NPD projects; uncertainty; incentives)
- (vi) Knowledge management for the entrepreneurial firm (exploration, exploitation, ambidexterity)
- (vii) Sustainability strategies (public policy incentives, internal cost tradeoffs, short versus long-term managerial incentives).

## EDITORIAL POSITIONS

Department Editor, Production and Operations Management, October 2003-present.

Special Issue Editor, Production and Operations Management on *Management of Technology*, Vol. 26, No. 4, 2017.

Associate Editor, Entrepreneurship and Innovation Department, Management Science, 2015- 2017.

Editorial Board, Foundations and Trends in Technology, Information and Operations Management, June 2013-present.

Member, Advisory Board for *Center on Organizational Learning*, Tepper School of Business, Carnegie Mellon University, Pittsburgh, PA, 15213, 2006-2010.

Advisory Editorial Board, Journal of Japanese Operations Management and Strategy, *special issue on The Revolution of Management Technologies*, December 2009-present.

Special Issue Editor, Production and Operations Management, *Management of Technology*, January 2008.

Associate Editor, Management Science, 1995-2007.

Editorial Board, Manufacturing & Service Operations Management, 2003-2005.

Associate Editor, Decision Sciences, 1993-2004.

Area Editor, Production and Operations Management (POMS), 2000-2003.

Senior Editor, Manufacturing & Service Operations Management, 2000-2002.

Department Editor, Institute of Industrial Engineers (IIE) Transactions, 1995-2001.

Department Editor, IEEE Transactions on Engineering Management, 1995-2001.

Editorial Board, Manufacturing & Service Operations Management, 1996-1999.

Associate Editor for Operations Research Letters, ORSA Journal, 1990-1995.

Editorial Review Board for Journal of Operations Management, 1991-1993.

Associate Editor for Annals of Operations Research, 1990.

## REFEREED PUBLICATIONS

Xiao, Wenli, Cheryl Gaimon, Ravi Subramanian, Markus Biehl, "Firm Level Environmental Strategies," Production and Operations Management, Vol. 28, No. 2, 2019, 407-420.

Gaimon, Cheryl, Manpreet Hora, Karthik Ramachandran, "Towards Building Multidisciplinary Knowledge of Management of Technology: An Introduction to the Special Issue," Production and Operations Management, Special Issue on *Management of Technology*, Vol. 26, No. 4, 2017, 567-578.

Ozkan-Seely, Gulru, Cheryl Gaimon, Stylianos Kavadias, "Dynamic Knowledge Transfer and Knowledge Development for Product and Process Design Teams," Manufacturing and Service Operations Management, Vol. 22, No. 2, 2015, 177-190.

Xiao, Wenli, Cheryl Gaimon, "The Effect of Learning and Integration Investment on Manufacturing Outsourcing Decisions: A Game Theoretic Approach," Production and Operations Management, Special Issue on Operations Integration, Vol. 22, No. 6, 2013, 1576-1592.

Gaimon, Cheryl, Jennifer Bailey, "Knowledge Management for the Entrepreneurial Firm," Production and Operations Management, Special Issue on *Operations Entrepreneurship*, Vol. 22, No. 6, 2013, 1429-1438.

Erat, Sanjiv, Stylianos Kavadias, Cheryl Gaimon, "The Pitfalls of Subsystem Integration: When Less is More," Management Science, Vol. 59, No. 3, 2013, 659-676.

Gaimon, Cheryl, Gulru Ozkan, Karen Napoleon, "Dynamic Resource Capabilities: Managing Workforce Knowledge with a Technology Upgrade," Organization Science, Vol. 22, No. 6, 2011, 1560-1578.

Chao, Raul, Stylianos Kavadias, Cheryl Gaimon, "Revenue Driven Resource Allocation and Effective NPD Portfolio Management," Management Science, Vol. 55, No. 9, 2009, 1556-1569.

Gaimon, Cheryl, "The Management of Technology: A Production and Operations Management Perspective" Production and Operations Management, Special Issue on *Management of Technology*, Vol. 17, No. 1, 2008, 1-11.

- Gaimon, Cheryl, Alysse Morton, "Investment in Changeover Flexibility for Early Entry in High Tech Markets," Production and Operations Management, Special Issue on *High Tech Production and Operations Management*, Vol. 14, No. 2, 2005, 159-174.
- Napoleon, Karen, Cheryl Gaimon, "The Creation of Output and Quality in Services: A Framework to Analyze Information Technology-Worker Systems," Production and Operations Management, Special Issue on *"Service Strategy and Technology Applications,"* Vol. 13, No. 3, 2004, 245-259.
- Carrillo, Janice, Cheryl Gaimon, "Managing Knowledge-Based Resource Capabilities Under Uncertainty," Management Science, Volume 50, No. 11, 2004, 1504-1518.
- Gaimon, Cheryl, Robert Burgess, "Analysis of Lead Time and Learning for Capacity Expansions," Production & Operations Management, Vol. 12, No. 1, 2003, 128-140.
- Carrillo, Janice, Cheryl Gaimon, "A Framework for Process Change," IEEE Transactions on Engineering Management, Volume 49, No. 4, November 2002, 409-427.
- Carrillo, Janice, Cheryl Gaimon, "Improving Manufacturing Performance Through Process Change and Knowledge Creation," Management Science, Volume 46, No. 2, 2000, 265-288.
- Franza, Richard, Cheryl Gaimon, "Flexibility and Pricing Decisions for High Volume Products with Short Life Cycles," International Journal of Flexible Manufacturing Systems, Volume 10, 1998, 43-71.
- Gaimon, Cheryl, "Planning Information Technology - Knowledge Worker Systems," Management Science, Volume 43, No. 9, 1997, 1308-1328.
- Gaimon, Cheryl, "Subcontracting Versus Capacity Expansion and the Impact on the Pricing of Services," Naval Research Logistics, Volume 41, No. 7, 1994, 875-892.
- Gaimon, Cheryl and Johnny Ho, "Uncertainty and the Acquisition of Capacity: A Competitive Analysis," Computers & Operations Research, Volume 21, No. 10, 1994, 1073-1088.
- Ghosh, Soumen and Cheryl Gaimon, "Production Scheduling in a Flexible Manufacturing System Environment With Setups," IIE Transactions, Volume 25, 1993, 21-35.
- Gaimon, Cheryl, Vinod Singhal, "Flexibility and the Choice of Facilities Under Short Product Life Cycles," European Journal of Operational Research, Volume 60, No. 2, 1992, 211-223.
- Ghosh, Soumen and Cheryl Gaimon, "Routing Flexibility and Production Scheduling in a Flexible Manufacturing System," European Journal of Operational Research, Volume 60, No. 3, 1992, 344-364.
- Roth, Aleda, Cheryl Gaimon, and Lee Krajewski, "Optimal Acquisition of FMS Technology Subject to Technological Progress," Decision Sciences, Volume 22, Number 2, Spring 1991, 308-334.
- Gaimon, Cheryl and Gerald L. Thompson, "A Real-Time Solution for Preventive and Repair Maintenance," Optimal Control Applications and Methods, Volume 10, 1989, 211-228.

- Gaimon, Cheryl, "Dynamic Game Results on the Acquisition of New Technology," Operations Research, Volume 37, Number 3, May-June 1989, 410-425.
- Gaimon, Cheryl, "The Acquisition of New Technology and Its Impact on a Firm's Competitive Position," Annals of Operations Research, Volume 15, 1988, 37-63.
- Schwan, Karsten and Cheryl Gaimon, "Automating Resource Allocation in Multiprocessors," Journal of Systems and Software, December, 1988, 1-16.
- Gaimon, Cheryl, "Simultaneous and Dynamic Price, Production, Inventory, and Capacity Decisions," European Journal of Operational Research, Volume 35, 1988, 426-441.
- Gaimon, Cheryl, Shantha Mohan, and Gerald L. Thompson, "A Network Approach to Cohort Personnel Planning Using Cross-Sectional Data," Computers and Operations Research, Volume 14, 1987, 183-196.
- Gaimon, Cheryl, "The Optimal Acquisition of New Technology and Its Impact on Dynamic Pricing Policies," Studies in Management Science and Systems, B. Lev, Editor, Volume 13, 1986, 187-206.
- Gaimon, Cheryl, "The Optimal Times and Levels of Impulsive Acquisition of Automation," Optimal Control Applications and Methods, Volume 7, 1986, 259-270.
- Gaimon, Cheryl, "The Continuous Acquisition of Automation to Reduce Production and In-Process Inventory Costs," Studies in Management Science and Systems, A. Kusiak, Editor, Volume 12, 1986, 29-44.
- Gaimon, Cheryl, "Optimal Inventory, Backlogging, and Machine Loading in a Serial, Multi-Stage, Multi-Period Production Environment," International Journal of Production Research, Volume 24, 1986, 647-662.
- Gaimon, Cheryl, "An Impulsive Control Approach to Deriving the Optimal Dynamic Mix of Manual and Automatic Output," European Journal of Operational Research, Volume 24, 1986, 360-368.
- Gaimon, Cheryl, "The Dynamical Optimal Acquisition of Automation," Annals of Operations Research, Volume 3, 1985, 59-79.
- Gaimon, Cheryl, "The Optimal Acquisition of Automation to Enhance the Productivity of Labor," Management Science, Volume 31, 1985, 1175-1190.
- Gaimon, Cheryl, "The Acquisition of Automation Subject to Diminishing Returns," IIE Transactions, Volume 17, 1985, 147-156. (Also, one of two research articles featured in Advanced Manufacturing Technology, November, 1985 issue.)
- Gaimon, Cheryl and Gerald L. Thompson, "A Distributed Parameter Cohort Personnel Planning Model Using Cross-Sectional Data," Management Science, Volume 30, 1984, 750-764.
- Gaimon, Cheryl and Gerald L. Thompson, "Optimal Preventive and Repair Maintenance of a Machine Subject to Failure," Optimal Control Applications and Methods, Volume 5, 1984, 57-67.

## BOOK CHAPTERS

Gaimon, Cheryl, Manpreet Hora, Karthik Ramachandran, "Process Capabilities and Leveraging Advances in Science and Technology," The Routledge Companion to Production and Operations Management, edited by M.K. Starr and S.K. Gupta, Taylor & Francis Group, NY, 2017, 197-213.

Franza, Richard, Cheryl Gaimon, "Investment in Facility Flexibility for Early Market Entry Under Competitive Uncertainty," in Managing Business Interfaces: Marketing, Engineering, and Manufacturing Perspectives, edited by A. Chakravarty and J. Eliashberg, Kluwer Academic Publishing, 2003.

Gaimon, Cheryl, Karen Napoleon, "Information Technology - Worker Systems in Structured and Unstructured Decision Making Environments," in Service Product Development, J. A. Fitzsimmons, Editor, Sage Publications, 2000, 183-215.

Biehl, Markus, Cheryl Gaimon, "Clean Manufacturing Strategies under the Influence of Public Policy," in Technology and Innovation Management, Dundar F. Kocaoglu, Timothy Anderson, Editors, published by IEEE and PICMET, 1999, 105-113.

Gaimon, Cheryl, "The Price-Production Problem: An Operations and Marketing Interface," in Operations Research: Methods, Models, and Applications, Jay E. Aronson and Stanley Zionts, Editors, Quorum Books, Westport, CT, 1998, 247-266.

Gaimon, Cheryl, "The Strategic Decision to Acquire Flexible Technology," Operations Research Society of America/The Institute of Management Sciences (ORSA/TIMS) Second Special Interest Conf. on Flexible Manufacturing Systems, K. Steckel and R. Suri, Eds., Elsevier Science Publishers, 1986, pp. 60-82.

Gaimon, Cheryl, "The Dynamic, Optimal Acquisition of Automation," Operations Research Society of America/The Institute of Management Sciences (ORSA/TIMS) First Special Interest Conf. on Flexible Manufacturing Systems, Ann Arbor, August 1984.

Gaimon, Cheryl, "The Effects of Fluctuations in the Economy or Technology on Cohort Careers," NATO Symposium on Work, Organizations, and Technological Change, R. J. Niehaus, G. Mensch, Eds., Plenum Press, 1982, pp. 343-357.

## OTHER PUBLICATIONS

Gaimon, Cheryl, *Book Review* of "Optimal Control Theory: Applications & Methods, Third Edition," Interfaces, to appear.

Gaimon, Cheryl, *Book Review* of "Optimal Control Theory: Applications & Methods, Second Edition," Interfaces, Volume 32, No. 6, November – December 2002.

## REFEREED PROCEEDINGS (Since 2000)

Xiao, Wenli, Cheryl Gaimon, Janice Carrillo, "Managing Knowledge in a Three-Stage Platform Development Project," Proc. EUROMA Conf. (European Operations Management Association), Neuchatel, Switzerland, June 2015.

- Xiao, Wenli, Cheryl Gaimon, Janice Carrillo, "Managing Knowledge in a Three-Stage Derivative Product Development Project," Proc. PICMET Conf. (Portland International Center for Management of Engineering Technology), Kanazawa, Japan, July 29, 2014.
- Ozkan, Gulru, Cheryl Gaimon, Stylianos Kavadias, "Knowledge Management in New Product Development," Proc. EUROMA Conf. (European Operations Management Association), Amsterdam, NL, July 2012.
- Gaimon, Cheryl, Karen Napoleon, Gulru Ozkan "Knowledge Management for Technology Acquisition and Implementation," Proc. EUROMA Conf. (European Operations Management Association), Ankara Turkey, June 2007.
- Ozkan, Gulru, Cheryl Gaimon, Stylianos Kavadias, "Knowledge Management in the Product and Process Design Lifecycle," Proc. EUROMA Conf. (European Operations Management Association), Ankara Turkey, June 2007.
- Janice Carrillo, Cheryl Gaimon, "Investing in Knowledge-Based Resources: Analysis of Uncertainty and Managerial Systems," Proc., National DSI Meeting, Washington, DC, November 2003.
- Morton, Alysse, Cheryl Gaimon, "Changeover Flexibility and NPD Cycle Time Reduction: Determining Market Entry Strategies," Proc., MSOM Conf., Ann Arbor, MI, June 2000.
- Napoleon, Karen, Cheryl Gaimon, "Sequential Investment in IT Upgrades and Worker Skill to Improve Performance in Service Operations," Proc., Production and Operations Management Society (POMS) Conf., San Antonio, TX, March 2000.

#### **CURRENT WORKING PAPERS OR PAPERS UNDER REVIEW**

- Bailey, Jennifer, Manpreet Hora, Cheryl Gaimon, "The Impact of Exploration, Exploitation, Learning from Success and Learning from Failure on Generating Breakthrough Inventions."
- Lee, Jaeseok, Cheryl Gaimon, Karthik Ramachandran, "An Economic Model of Knowledge Outsourcing."
- Ozkan, Gulru, Cheryl Gaimon, "Game Theoretic Analysis of Strategic Alliances Between Competing Firms: Knowledge Transfer and Sharing."
- Xiao, Wenli, Cheryl Gaimon, Janice Carrillo, "Knowledge Creation in a Three-Stage NPD Project."
- Bailey, Jennifer, Cheryl Gaimon, "Collaboration and Competition in Exploration and Exploitation Learning for the Entrepreneurial Firm."
- Xiao, Wenli, Cheryl Gaimon, "Portfolio Management of a Radical and an Incremental NPD Project."

**PRESENTATIONS (Since 2000) (Conference, Workshop, Panel, and Invited Speaker)**

“The Development of a New Product Versus the Improvement of an Existing Product,” with Wenli Xiao, POMS Conference, Washington DC, May 2019.

“An Economic Model of Knowledge Outsourcing,” with Jaeseok Lee and Karthik Ramachandran, POMS Conference, Washington DC, May 2019.

“Knowledge Transfer from a Radical Development Project to Improve an Existing Product,” 2019 Annual ISOM Research Workshop, University of Florida – Gainesville, March 2019.

“Knowledge Outsourcing for Competing Buyers,” with Jaeseok Lee and Karthik Ramachandran, INFORMS Conference, Phoenix, AZ, November 2018.

“Impact of Knowledge Transfer on Knowledge Development Strategies,” with Wenli Xiao, INFORMS Conference, Phoenix, AZ, November 2018.

“Knowledge Development and Knowledge Transfer Subject to High Technical Uncertainty,” with Wenli Xiao, Illumina Corporation, (manufacturer of genome sequencing technology), San Diego, August 2018.

“Knowledge Outsourcing for Multiple Buyers,” with Jaeseok Lee and Karthik Ramachandran, POMS Conference, Houston, TX, May 2018.

“An Economic Model of Knowledge Outsourcing,” invited speaker at Tulane University, March 2018.

“Investment in Environmental Process Improvement,” invited speaker at University of Washington – Bothel, May 2017.

“Advancing Women Leadership Panel,” POMS Conference, Bothel, Washington, May 2017.

“Innovation and Technology Management Panel,” POMS Conference, Bothel, Washington, May 2017.

“Meet the Editors Panel,” INFORMS Conf., Nashville TN, November 2016.

“An Economic Model of Knowledge Outsourcing,” with Jaeseok Lee and Karthik Ramachandran, INFORMS Conf., Nashville TN, November 2016.

“An Economic Model of Knowledge Outsourcing,” with Jaeseok Lee and Karthik Ramachandran, POMS Conf., Orlando FL, May 2016.

“An Economic Model of Knowledge Outsourcing,” with Jaeseok Lee and Karthik Ramachandran, INFORMS Conf., Philadelphia PA, November 2015.

“Managing NPD Knowledge Between Competing Firms,” with Gulru Ozkan-Seely and Sriram Venkataraman, INFORMS Conf., Philadelphia PA, November 2015.

- “Managing Knowledge in a Three-Stage Platform Development Project,” with Wenli Xiao and Janice Carrillo, EUROMA (European Operations Management Association) Conference, Neuchatel, Switzerland, June 2015.
- “Opportunities for Behavioral Research: Management of Technology,” POMS Conference, Washington DC, May 2015.
- “An Economic Model for Knowledge Outsourcing,” with Jaeseok Lee, POMS Conference, Washington DC, May 2015.
- “Dynamic Firm Level Investments in Environmental Process Improvement,” with Wenli Xiao, Ravi Subramanian, Markus Beihl, POMS Conference, Washington DC, May 2015.
- “Special Topics: Doctoral Consortium, POMS Conference, Washington DC, May 2015.
- “Supplier and Buyer Coordination for Knowledge Outsourcing under Asymmetric Information,” with Jaeseok Lee, INFORMS Conf., San Francisco, CA, November 2014.
- “Knowledge Transfer in Derivative Product Development Projects,” with Wenli Xiao and Janice Carrillo, INFORMS Conf., San Francisco, CA, November 2014.
- “Investment in Environmental Process Improvement in Response to Regulation,” with Ravi Subramanian and Markus Biehl, INFORMS Conf., San Francisco, CA, November 2014.
- “Managing Knowledge in a Three-Stage New Product Development Project,” with Wenli Xiao and Janice Carrillo, PICMET Conf. (Portland International Center for Management of Engineering Technology), Kanazawa, Japan, July 29, 2014.
- “Supplier and Buyer Coordination for Knowledge Outsourcing,” with Jaeseok Lee, POMS Conf., Atlanta, GA, May 2014.
- “Forward Versus Feedback Knowledge Transfer in a Three-Stage NPD Project,” with Wenli Xiao, POMS Conf., Atlanta, GA, May 2014.
- “Knowledge Transfer in Product Development Projects,” with Wenli Xiao, POMS Conf., Atlanta, GA, May 2014.
- “The Ambidexterity Paradox: The Benefits and Perils of Exploration, Exploitation, and Learning from Failure,” with Jennifer Bailey and Manpreet Hora, POMS Conf., Atlanta, GA, May 2014.
- Panel moderator, “Making Professional Connections,” POMS Conf., Atlanta, GA, May 2014.
- “Forward Versus Feedback Knowledge Transfer in a Three-Stage NPD Project,” University of Calgary, Canada, April 2014.
- “Forward Versus Feedback Knowledge Transfer in a Three-Stage NPD Project,” University of Texas-Austin, Texas, April 2014.
- “Forward Versus Feedback Knowledge Transfer in a Three-Stage NPD Project,” Ohio State University, Ohio, March 2014.

“Editors’ Panel,” College of Product Innovation and Technology Management Conf., Minneapolis, MN, October 2013.

“Editors’ Panel on Innovation, Product Development, and Technology Management, INFORMS Conf., Minneapolis, MN, October 2013.

“Knowledge Creation in a Three-Stage New Product Development Project,” with Wenli Xiao and Janice Carrillo, 27<sup>th</sup> European Conference on Operational Research, Rome, Italy, July 2013.

“The Impact of Exploration, Exploitation and Learning from Experience on Innovation Success and Failure,” with Jennifer Bailey and Manpreet Hora, Darden-Cambridge Entrepreneurship and Innovation Research Conference, May 2013.

“Knowledge Management and Entrepreneurship,” with Jennifer Bailey, POMS Conf., Denver, CO, May 2013.

Panel moderator, “Women in Operations Management: Navigating the Dual Career Lifestyle,” POMS Conf., Denver, CO, May 2013.

“Analysis of Knowledge Transfer from a New Product Development Project to an Existing Project,” with Wenli Xiao, POMS Conf., Denver, CO, May 2013.

“Panel on OM Research in Learning and Knowledge Management,” POMS Conf., Denver, CO, May 2013.

“Impact of Exploration, Exploitation and Learning from Experience on Innovation Success and Failure,” with Jennifer Bailey and Manpreet Hora, POMS Conf., Denver, CO, May 2013.

“Knowledge Development and Knowledge Transfer in New Product Development Projects,” with Wenli Xiao and Janice Carrillo, INFORMS Conf., Phoenix, AZ, October 2012.

“A Dynamic Model of Knowledge Creation from Exploration and Exploitation,” with Jennifer Bailey, INFORMS Conf., Phoenix, AZ, October 2012.

“Knowledge Management in New Product Development,” with Gulru Ozkan and Stylianos Kavadias, EUROMA Conf., Amsterdam, NL, July 2012.

“Dynamic Knowledge Creation from Exploration and Exploitation in the High Tech Venture,” with Jennifer Bailey, POMS Conf., Chicago, IL, April 2012.

“Knowledge Creation and Transfer in New Product Development Projects,” with Wenli Xiao, POMS Conf., Chicago, IL, April 2012.

“Managing Knowledge for Joint Development of New Products,” with Gulru Ozkan, POMS Conf., Chicago, IL, April 2012.

Panel Moderator, “Women in POM: An International Perspective,” POMS Conf., Chicago, IL, April 2012.

“Knowledge Transfer in New Product Development Projects,” invited speaker Wilfrid Laurier University, Canada, February 2012.

“Knowledge Management in New Product Development,” with Gulru Ozkan and Stylianos Kavadias, University of Utah Conference on Marketing and Operations Innovation, January 2012.

Panel member on “Product Innovation and Technology Management” PITM Conf., University of Charlotte, Charlotte NC, November 2011.

“Managing New Product Development Knowledge between Competing Firms,” with Gulru Ozkan, Sriram Venkataraman, INFORMS Conf., Charlotte, NC, November 2011.

Knowledge Creation from Exploration and Exploitation in the High-Tech Venture,” with Jennifer Bailey, INFORMS Conf., Charlotte, NC, November 2011.

Knowledge Transfer and Knowledge Creation in New Product Development Projects,” with Wenli Xiao, INFORMS Conf., Charlotte, NC, November 2011.

Panel member, “Why Women Are Leaving Academia” INFORMS Conf., Charlotte, NC, November 2011.

“Knowledge Transfer and Creation in New Product Development Projects,” with Wenli Xiao IFORS (International Federation of Operations Research Societies), Melbourne, Australia, July 2011.

“Knowledge Creation and Knowledge Transfer in New Product Development,” with Wenli Xiao, POMS Conf., Reno, Nevada, May 2011.

“Managing New Product Development Knowledge Between Competing Firms,” with Gulru Ozkan, POMS Conf., Reno, Nevada, May 2011.

“Collaboration and Competition in Exploration and Exploitation Learning in Technology Ventures, with Jennifer Bailey, POMS Conf., Reno, Nevada, May 2011.

Panel discussion “Meet the Editors” POMS Conf., Reno, Nevada, May 2011.

“Dynamic Learning Strategies for High-Tech Start-Up Ventures,” with Jennifer Bailey, INFORMS Conf., Austin, TX, November 2010.

“Knowledge Creation and Knowledge Transfer in New Product Development Projects,” with Wenli Xiao and Janice Carrillo, INFORMS Conf., Austin, TX, November 2010.

“Managing New Product Development Knowledge for Competing Firms: Case of Joint Development, with Gulru Ozkan, INFORMS Conf., Austin, TX, November 2010.

Panel discussion “Meet the Editors” INFORMS Conf., Austin, TX, November 2010.

“Dynamic Resource Capabilities: Workforce Knowledge Management with a Technology Upgrade,” Tsinghua University, Beijing, China, August 2010.

- Plenary talk: "Management of Technology and the Resource-Based View of the Firm," 4<sup>th</sup> International Conference of Operations and Supply Chain Management," Hong Kong and Guangzhou, China, July 2010.
- Panel member, "Meet the Editors," INFORMS Conf., Charlotte, NC, November 2011.
- "Technology Management: How Times Are Changing," POMS Conf., Vancouver BC, Canada, May 2010.
- "Managing New Product Development Knowledge for Competing Firms: Case of Joint Development," with Gulru Ozkan, POMS Conf., Vancouver BC, Canada, May 2010.
- "Dynamic Learning Strategies for High-Tech Start-Up Ventures," with Jennifer Bailey, POMS Conf., Vancouver BC, Canada, May 2010.
- "Knowledge Transfer in New Product Development Projects," with Wenli Xiao and Janice Carrillo, POMS Conf., Vancouver BC, Canada, May 2010.
- "Knowledge Management with a Technology Upgrade," invited speaker, University of Minnesota, Minneapolis, MN, October 2009.
- "Workforce Knowledge Management and the Implementation of New Technology," with Gulru Ozkan and Karen Napoleon, INFORMS Conf., San Diego, CA, October 2009.
- "Managing New Product Development Knowledge Between Competing Firms," with Gulru Ozkan, INFORMS Conf., San Diego, CA, October 2009.
- "The Effect of Learning on Manufacturing Outsourcing Decisions: A Game Theoretic Approach," with Wenli Xiao, INFORMS Conf., San Diego, CA, October 2009.
- "The Effect of Learning on Manufacturing Outsourcing Decisions: A Game Theoretic Approach," with Wenli Xiao, POMS Conf., Orlando, FL, May 2009.
- "Managing New Product Development Knowledge Between Competing Firms," with Gulru Ozkan, POMS Conf., Orlando, FL, May 2009.
- "Knowledge Management for Product and Process Development Teams," with Gulru Ozkan, invited speaker, ESSEC, Paris, France, March 2009.
- "Knowledge Management for New Product Development in a Competitive Environment," with Gulru Ozkan, INFORMS Conf., Washington DC, October 2008.
- "Modes of Experimentation to Facilitate New Product Development Knowledge Management," with Janice Carrillo, INFORMS Conf., Washington DC, October 2008.
- "Firm Level Environmental Strategies," with Ravi Subramanian, INFORMS Conf., Washington DC, October 2008.
- "Knowledge Management Strategies for Product and Process Design Teams," with Gulru Ozkan and Stylianos Kavadias, POMS Conf., San Diego, CA, May 2008.

- "Firm Level Environmental Strategies," with Ravi Subramanian, Markus Biehl, POMS Conf., San Diego, CA, May 2008.
- "Knowledge Management to Accelerate Production Ramp-Up," with Janice Carrillo, POMS Conf., San Diego, CA, May 2008.
- "Budget Creation and Control for Effective NPD Portfolio Management," with Raul Chao and Stylianos Kavadias, INFORMS Conf., Seattle, WA, November 2007.
- "Workforce Knowledge Management and the Investment in New Technology," with Karen Napoleon and Gulru Ozkan, INFORMS Conf., Seattle, WA, November 2007.
- "Knowledge Management for the Product and Process Design Teams," with Gulru Ozkan and Stylianos Kavadias, INFORMS Conf., Seattle, WA, November 2007.
- "Knowledge Management for Technology Acquisition and Implementation," with Karen Napoleon and Gulru Ozkan, EUROMA (European Operations Management Association) Conf., Ankara Turkey, June 2007.
- "Knowledge Management in the Product and Process Design Lifecycle," with Gulru Ozkan EUROMA Conf., Ankara, Turkey, May 2007.
- "Knowledge Management for Technology Acquisition and Implementation," with Karen Napoleon and Gulru Ozkan, POMS Conf., Dallas, TX, May 2007.
- "Knowledge Management in the Product and Process Design Lifecycle," with Ozkan, Gulru, POMS Conf., Dallas, TX, May 2007.
- "Strategic New Product Development Resource Allocation with an Endogenous Budget," with Raul Chao and Stylianos Kavadias, Technology Management Conf., Wharton Business School, Philadelphia, PA, April 2007.
- Budget Creation and Control for Effective NPD Portfolio Management," with Raul Chao and Stelios Kavadias, INFORMS Conf., Pittsburgh, PA, November 2006.
- "Knowledge Management for Product and Process Design Teams," with Gulru Ozkan, INFORMS Conf., Pittsburgh, PA, November 2006.
- "Knowledge Management and the Purchase and Implementation of New Technology," invited speaker, INSEAD, France, June 2006.
- "Knowledge Management and Technology Acquisition and Implementation," with Karen Napoleon, invited speaker, University of Oregon, Eugene, OR, May 2006.
- "Budget Creation and Control for NPD Portfolio Management," with Raul Chao and Stelios Kavadias, invited speaker, Conf. on Management Science and Applications in Honor of Suresh Sethi, University of Texas at Dallas, Dallas TX, May 2006.
- "The Transition to Clean Manufacturing," with Markus Biehl, invited speaker, Conf. on Management Science and Applications in Honor of Suresh Sethi, University of Texas at Dallas, Dallas TX, May 2006.

- "Knowledge Management and Technology Acquisition and Implementation," with Karen Napoleon, invited speaker, Conf. on Management Science and Applications in Honor of Suresh Sethi, University of Texas at Dallas, Dallas TX, May 2006.
- "R&D Intensity: the Missing Link in NPD Portfolio Management," with Raul Chao and Stelios Kavadias, POMS Conf., Boston, MA, April 2006.
- "Knowledge Management for Product and Process Design Teams," with Gulru Ozkan, POMS Conf., Boston, MA, April 2006.
- "Knowledge Management and Technology Acquisition and Implementation," with Karen Napoleon, POMS Conf., Boston, MA, April 2006.
- "Knowledge Management and Technology Acquisition and Implementation," with Karen Napoleon, invited speaker, University of Texas at Dallas, Dallas TX, Feb., 2006.
- "Knowledge Management and Technology Acquisition and Implementation," Knowledge Management: Learning Economics Group Workshop, invited speaker, hosted by Genetech, San Francisco, CA, December 2005.
- "Technology Markets: The Case of Component Providers," with Sanjiv Erat and Stelios Kavadias, INFORMS Conf., San Francisco, CA, November 2005.
- "Managing Employee Knowledge Through External Knowledge Transfer and Learning-by-Doing," with Gulru Ozkan, INFORMS Conf., San Francisco, CA, November 2005.
- "New Product Development, Innovation and Technology," member of panel, INFORMS Conf., San Francisco, CA, November 2005.
- "Strategic NPD Pipeline Management with an Endogenous Budget," with Raul Chao and Stylianos Kavadias, INFORMS, San Francisco, CA, November 2005.
- "Knowledge Management and the Purchase/Implementation of New Technology," with Karen Napoleon, invited speaker, University of Texas-Dallas, October 2005.
- "Knowledge Transfer in the Presence of Learning," with Gulru Ozkan, POMS Conf., Chicago, IL, May 2005.
- "NPD Pipeline Management with an Endogenous Budget," with Raul Chao and Stelios Kavadias, POMS Conf., Chicago, IL, May 2005.
- "Strategic New Product Development Resource Allocation with an Endogenous Budget," with Raul Chao and Stylianos Kavadias, INFORMS Conf., Denver, CO, October 2004.
- "Research Themes in the Management of Technology," moderated a panel, POMS Conf., Cancun, Mexico, April 2004.
- "Managing Knowledge-Based Core Capabilities Under Uncertainty," with Janice Carrillo, invited speaker, Purdue University, April 2004.

- "Investment in IT-Worker Systems," with Karen Napoleon, invited speaker, Workshop on Technology Management, University of Florida, Gainesville, FL, February. 2004.
- "Investing in Knowledge-Based Resources: Analysis of Uncertainty and Managerial Systems," with Janice Carrillo, National DSI Meeting, November 2003.
- "Dynamic Investment in Knowledge for IT-Worker Systems," with Karen Napoleon, INFORMS Conf., Atlanta, GA, October 2003.
- "Managing Knowledge-Based Resource Capabilities Under Uncertainty," with Janice Carrillo, invited speaker, Boston College, April 2003.
- "Managing Knowledge-Based Resource Capabilities Under Uncertainty," with Janice Carrillo, POMS Conf., Savannah, GA, April 2003.
- "Managing Knowledge-Based Resource Capabilities Under Uncertainty," with Janice Carrillo, invited speaker, University of North Carolina at Chapel Hill, NC, March 2003.
- "Managing Knowledge-Based Core Capabilities Under Uncertainty," with Janice Carrillo, invited speaker, Workshop on Managing Knowledge in Organizations: Creating, Retaining, and Transferring Knowledge, Carnegie Mellon Univ., Pittsburgh, PA, September 2001.
- "Leveraging Knowledge for Effective Process Change Management," with Janice Carrillo, invited speaker, University of Pittsburgh, Pittsburgh, PA, September 2001.
- "Changeover Flexibility and NPD Cycle Time Reduction: Determining Market Entry Strategies," with Alysse Morton, MSOM Conf., Ann Arbor, MI, June 2000.
- "Sequential Investment in Information Technology and Worker Skill to Improve Performance in Service Operations," with Karen Napoleon, POMS Conf., San Antonio, TX, April 2000.

#### **AWARDS AND HONORS (Partial List)**

- Sushil K. Gupta POMS Distinguished Service Award 2014, May 2014.*
- Brady Family Award for Faculty Research Excellence, awarded by the Scheller College of Business, Georgia Institute of Technology, April 2014.*
- Fellow of the Production and Operations Management Society, May 2009.*
- Distinguished Service Award, Technology Management Section, INFORMS, October 2009.*
- Distinguished Fellow Award, College of Product Innovation & Technology Management, POMS, May 2008.*
- Distinguished Speaker: Technology Management Section, "The Impact of Technological Developments on Research in Technology Management," INFORMS Conference, Seattle WA, November 2007.*
- Regents' Professor, Board of Regents, University System of Georgia, 2005.*

*University Faculty Research Award for Outstanding Doctoral Thesis Advisor*, Georgia Institute of Technology, 1999.

*Advisor of Outstanding Student Paper Award Winner*, Portland International Conf. on Management of Engineering and Technology, "The Implications of Firm Size on Process Improvement Strategy" June 1997 (with Janice Carrillo).

*Best Theoretical-Empirical Research Paper Award*, National Decision Sciences Institute Conf., 1987, for paper entitled "Dynamic Open Versus Closed Loop Results on the Acquisition of New Technology."

*Best Theoretical-Empirical Research Paper Award*, National Decision Sciences Institute Conf., 1986, for paper entitled "Optimal Acquisition of FMS Technology Subject to Technological Progress," (with Aleda Roth, Lee Krajewski).

### **CURRICULUM AND COURSE DEVELOPMENT (Georgia Institute of Technology)**

Courses have been developed and taught at the undergraduate, MBA, Ph.D. and Executive Program levels, as described below.

#### *Operations Management: Undergraduate and Master Levels*

As Area Coordinator for OM during 1988-1995, had responsibility to oversee development of the undergraduate and master level curriculum. Efforts culminated in the creation of a core course, a variety of electives, a Certificate for OM at the undergraduate level and a Concentration at the master degree level.

#### *Management of Technology Certificate Program: Master Level*

One of four faculty who developed the Management of Technology (Graduate) Certificate Program. As Program Director, led a committee, with representation from every college on campus, in the revision of the certificate. Also, lead annual review and revision.

#### *Doctoral Program Level: Operations Management*

As Area Coordinator for OM during 1988-1995, led efforts to develop the Ph.D. curriculum for Operations Management.

### **Courses Developed and Delivered (Regular Degree Programs)**

MGT 6350 Operations Management. Core required course in OM for the Master of Science in Management (MSM) program. This course is designed to analyze the challenges associated with managing a firm's resources (equipment, work force, materials, information) for long-term competitive advantage. Both the service sector and manufacturing are addressed. Topics include quality management; manufacturing design, cost and performance analysis; service sector design and performance analysis; justification of traditional and new technologies; capacity planning; location; facility design; work measurement; and learning.

- MGT 6357 Service Operations Management Elective (Master and Undergrad. Levels)  
 MGT 4366 Focus on the analysis of service sector performance and methods designed to improve service sector competitiveness. Special emphasis is placed on the impact of new technologies. The industries analyzed include: health care, banking, insurance, telecommunications, transportation and distribution, retail and restaurant, office environments, and police/fire departments. The topics addressed cutting across many industries include: productivity, quality, work force management, location, capacity planning, effect of new technology, and international trends.
- MGT 6772 Managing Resources of the Technological Firm (Graduate section is cross-listed as  
 MGT 3510 ISyE 6772 and serves as the core required course for the *Management of Technology* (MOT) Graduate Certificate Program as well as an elective for Management and ISyE master degree programs. Undergraduate course, entitled Management of Technology, is a management elective.) This course is designed to analyze the challenges associated with managing resources for a technology-based firm. Resources examined include manufacturing technologies, information technologies, work force, and materials. Particular focus is placed on planning under present conditions including rapid technological innovation, international competition, and changing market needs. Topics include: innovation processes, technology transfer, R&D, technology strategy, managing technology change, productivity and new technology implementation, product/process quality, supply chain management, knowledge management, and methods for justification of new technologies.
- MGT 7350 The Life Cycle of Knowledge Management Activities (Ph.D. level). The course enables students to understand research spanning four phases of the lifecycle of a firm's knowledge management activities from ideation through commercialization. We explore literature in Phase I of the life cycle where the firm identifies an opportunity or generates an idea. In Phase II of the life cycle, we consider literature on how the firm deploys knowledge to evaluate an opportunity or idea. For the third phase of the life cycle, we explore how a firm builds and sustains an enterprise to generate value in the marketplace through new product and process development. Lastly, in Phase IV of the life cycle, we explore research on market entry, survival, and exit strategies. Note that a key thrust of the course is to consider research in Phase III of the life cycle. While most of the literature in this course has foundations in operations management, we also consider research from organizational theory and strategy. Moreover, the research methods deployed in the literature include normative (optimization methods) as well as empirical methods.
- MGT 8855 Dynamic Decision Making in Operations Management (Ph.D. level). The focus of this course is on strategic and long term decision making in the Operations Management research literature including quality management, technology choice, resources planning, production planning and pricing, new technology implementation, and knowledge management. The decision-making environments are dynamic and typically nonlinear. The course introduces mathematical methods used for the research: calculus of variations and optimal control theory. A set of lecture notes have been developed which form the basis of the mathematical development presented in class.

Over 60 *Independent Study Courses* have been given.

## **Executive Education Courses**

### EMOT 6110 Technology and Transformational Work Processes

Core required course in the Executive Management of Technology Master Degree Program. (Course is co-taught with Vinod Singhal.) This course is designed to analyze the challenges associated with managing a firm's resources (equipment, work force, materials, information) for long-term competitive advantage. Particular focus is placed on the manner in which a firm's resources should be configured and evolve in the context of rapid technological innovation, international competition, and changing market needs.

### GTMMMP (Georgia Tech Mid-Management Program)

Developed and taught session entitled: "Delivering Value to the Customer." Focus on the manner in which OM decisions impact on a firm's competitive position. Both manufacturing and service organizations are considered. Emphasis on recent innovations in operations principles including product/process design and integration, supply chain management, knowledge management, and quality management.

### BellSouth Strategic Management Program

Developed and taught sessions on Operations Management and the Management of Technology; Discussion of (i) using Operations Management as a competitive weapon, and (ii) managing resources of the technological firm. Emphasis on the service sector and the telecommunications industry. Analysis of the effect of innovations, technology change and transfer, and performance.

### Apple South Management Program

Developed and taught multiple sessions. Focus on (i) using Operations Management as a competitive weapon, and (ii) capacity, distribution, and location analysis. Emphasis placed on the service sector and the retail/restaurant industries.

## **PROFESSIONAL SERVICES**

### **Professional Society Committees and Elected Positions (Partial List)**

*Co-Chair, POMS 25<sup>th</sup> Annual Conference, May 2014.*

*Elected Production and Operations Management Society: President-Elect 2007-8; President, 2008-9; Past President, 2009-2012.*

Member, INFORMS Publications Committee, January 2011-December 2012.

Member, Search Committee for Editor-in-Chief of INFORMS Journal on Computing, 2012.

Chair, Manufacturing and Service Operations Management Review Committee, INFORMS, 2011.

Member, Skinner Best Paper Award Committee, Production and Operations Management Society, 2010-11.

Chair, Fellows Committee, Production and Operations Management Society, 2010-2011.

Founding Co-President, Production and Operations Management Society *College on Product Innovation and Technology Management*, 2004-2007.

*Elected* Vice President of Member Activities, Production and Operations Management Society, 2004-6.

Member, Skinner Best Paper Award Committee, Production and Operations Management Society, 2006.

Member of Program Committee, International Production and Operations Management Society Conf., Italy, Summer 2003.

*Elected* Board Member, Production and Operations Management Society, 2002-3.

*Elected* Secretary-Treasurer, ORSA Technical Section on Manufacturing & Operations Management, 1994-1995.

Chair, Student Paper Awards Committee, ORSA Technical Section on Manufacturing & Operations Management, 1994.

Chair, Awards Committee, ORSA Technical Section on Manufacturing & Operations Management, 1992-1993. (Designed first annual student paper awards competition.)

#### **Professional Society Conf. Activities (Partial List)**

*“Best Paper Award”* Committee, POMS 2010.

*Program Committee*, POMS Conf., 2003.

*Track Chair* at several INFORMS and POMS Confess.

*Session Chair/Organizer* at many national and international conferences.

Frequent *Invited Speaker* at *New Faculty* and *Ph.D. Student Consortiums*, POMS Conferences.

Frequent *Invited Speaker* at *New Faculty* and *Ph.D. Student Consortiums*, National DSI Conferences.

#### **Reviewer Activities (Partial List)**

I have reviewed articles for journals and proposals to funding agencies including:

*Academy of Management*

*IEEE Transactions on Engineering Management*

*IIE Transactions*

*Journal of Operations Management*

*Management Science*

*Manufacturing and Service Operations Management*

*National Science Foundation*

*Naval Research Logistics*

*Operations Research*

*Production and Operations Management*

## **INSTITUTE and COLLEGE SERVICE (Georgia Institute of Technology)**

**Director of the Management of Technology Certificate Program**, 1999-present. Beyond activities described earlier under *Curriculum Development*, the following has been accomplished. (i) Chaired a university wide committee of faculty to develop and subsequently to improve the MOT Certificate program. (ii) Periodically create, administer and evaluate a survey of students who completed the certificate to seek formal input for program improvement. (iii) Streamlined administrative processes. (iv) Create and distribute a brochure and design/update a web page describing the program. (v) Advise students on coursework. (vi) Continually update program electives as new course become available.

**Area Coordinator for Operations Management**, Scheller College of Business, August 2014-August 2015. Primary responsibility is the oversight of all administrative duties in the Operations Management Area.

**Area Coordinator for Operations Management**, College of Management, 1988-1995. Primary responsibilities included initiating development of the OM area curriculum and courses (core and elective) at the undergraduate, master, and Ph.D. levels; recruit OM area faculty.

### **College/Institute Committees (Partial List Since 2000)**

Member, Institute Reappointment, Promotion, & Tenure Committee, GaTech, 2019.

Co-Chair (elected), Reappointment, Promotion, & Tenure Committee, Scheller College, 2018-2109.

Member, Institute's Honorary Degree & Commencement Speaker Committee, 2018-19.

Member, Regents Award Committee, 2018

Member, Regents Award Committee, 2015.

Member, Regents Award Committee, 2014.

Member (elected), Dean's Advisory Committee, 2013-14.

Member (elected) and Chair, Periodic Peer Review Committee, 2013-14.

Member, Regents Award Committee, 2013.

Director, Management of Technology Certificate Program, 1999-present.

Member, Regents Award Committee, 2012.

Member, Regents Award Committee, 2011.

Member (elected) Executive Board, 2006-2009.

Member (elected), College of Management Personnel Committee, 2007-8.

Member (elected), College of Management Personnel Committee, 2006-7.

Member College Ph.D. Committee, 2003-2007.

Member (elected) Student Academic and Financial Affairs Committee, 2003-2006.

Member (elected) Academic Senate, 2003-2006.

Member Search Committee for ISyE School Chair, 2004-2005.

Member College Ph.D. & Research Committee, 1999-2002.

Member Dean's Advisory Committee, (elected), 2000-2001.

Member Regents Professor Awards Committee, 2001.

Member Institute Faculty Research Awards Committee, 2000.

Member Regents Professor Awards Committee, 2000.

#### **Doctoral Committees (Partial List at Georgia Tech)**

Co-Chair, Ph.D. Dissertation Committee, Jaeseok-Lee, 2018.

Member Ph.D. Dissertation Committee, Marcus Bellamy, 2015.

Member, Ph.D. Dissertation Committee, Jeremy J. Kovach, 2014.

Chair, Ph.D. Dissertation Committee, Jennifer Bailey, 2013.

Chair, Ph.D. Dissertation Committee, Wenli Xiao, 2012.

Member, Ph.D. Dissertation Committee, Jeremy Hutchinson-Krupat, 2011.

Member, Ph.D. Dissertation Committee, Nektarios Oraopoulos, 2009.

Chair, Ph.D. Dissertation Committee, Gulru Ozkan, 2008.

Member, Ph.D. Dissertation Committee, Raul Chao, 2007.

Co-Chair, Ph.D. Dissertation Committee, Sanjiv Erat, 2006.

Member, Ph.D. Dissertation Committee, Erik Lystad, 2006.

Member, Ph.D. Dissertation Committee, Se-Kyoung Oh, 2005.

Member, Ph.D. Dissertation Committee, Jack Su.

Member, Ph.D. Dissertation Committee, Patty Swafford, 2003.

Member, Ph.D. Committee, Milind Gahanan Sohoni, 2002.

Member, Ph.D. Committee, Joon Park, 2002.

Chair, Ph.D. Dissertation Committee, Markus Biehl, 1998.

Chair, Ph.D. Dissertation Committee, Rick Franza, 1997.

Chair, Ph.D. Dissertation Committee, Karen Napoleon, 1997.

Chair, Ph.D. Dissertation Committee, Janice Carrillo, 1997. *\*Awarded research fellowship from Intel Corporation, 1994-5. \*Awarded Best Student Paper at Portland International Conf. on Management of Engineering and Technology, July 1997.*

Chair, Ph.D. Dissertation Committee, Alysse Rosewater, 1997.

#### **Doctoral Committees (Ohio State University)**

Chair, Ph.D. Dissertation Committee, Soumen Ghosh, December 1987.

Co-Chair, Ph.D. Dissertation Committee, Aleda V. Roth, December 1985. *"Best Dissertation Award" from Decision Sciences Institute, 1986.*

Member, Ph.D. Dissertation Committee, Vicki L. Daniels, June 1984.