

# Brett A. Peters

## Professional Data

April 6, 2012

### *Office Address*

Department of Industrial and Systems Engineering  
4045 Emerging Technologies and Economic  
Development Building  
Texas A&M University  
3131 TAMUS  
College Station, TX 77843-3131  
(979) 458-2365  
bpeters@tamu.edu

### **Education**

- 1992 Ph.D. in Industrial Engineering from Georgia Institute of Technology  
Dissertation Title: “Strategic Design of Flexible Assembly Systems”  
Advisor: Dr. Leon F. McGinnis
- 1988 M.S.I.E. from Georgia Institute of Technology  
Computer Integrated Manufacturing Systems (CIMS) Certificate
- 1987 B.S.I.E. from the University of Arkansas  
Registered Engineer-in-Training (#3954) in the State of Arkansas since 1987

### **Employment History**

- 2002 – present Professor of Industrial and Systems Engineering, Texas A&M University
- 2004 – 2011 Department Head of Industrial and Systems Engineering, Texas A&M University  
(see attached *Overview of Administrative Accomplishments*)
- 2002 – 2003 Interim Department Head of Industrial Engineering, Texas A&M University
- 1997 – 2002 Associate Professor of Industrial Engineering, Texas A&M University
- 1992 – 1997 Assistant Professor of Industrial Engineering, Texas A&M University
- 1987 – 1991 Graduate Research Assistant, Georgia Tech Material Handling Research Center
- 1988 – 1991 Independent consultant in facility design and material handling, Atlanta, GA
- 1987 Associate Consultant, SysteCon, A Coopers & Lybrand Division, Atlanta, GA
- 1984 – 1987 Research Assistant, Robotics and Automation Laboratory, Industrial Engineering  
Department, University of Arkansas

### **Engineering Professional Societies**

- American Society of Engineering Education (ASEE)
- Institute for Operations Research and the Management Sciences (INFORMS)
- Institute of Industrial Engineers (IIE)
- International Council on Systems Engineering (INCOSE)
- Society of Manufacturing Engineers (SME)

## Awards

Fellow, Institute of Industrial Engineers, 2010  
Outstanding Young Engineering Alumni, College of Engineering, University of Arkansas, 2005  
Inducted into Arkansas Academy of Industrial Engineering, University of Arkansas, 2005  
Dwight Look College of Engineering Faculty Fellow, Texas A&M University, 2004–2005  
Outstanding Young Manufacturing Engineer, Society of Manufacturing Engineers, 2001  
Ford Engineering Design Faculty Fellow, Texas A&M University, 2001–2004  
Research Initiation Awardee, National Science Foundation, 1993  
President’s Fellowship, Georgia Institute of Technology, 1987–1991  
Student Award for Excellence as Top IE Undergraduate, Institute of Industrial Engineers, 1987  
Senior Honor Citation for Top Male Graduate, University of Arkansas, 1987  
Inducted into Alpha Pi Mu, 1986  
Inducted into Tau Beta Pi, 1985

## Areas of Interest

Facilities Logistics, Planning, and Design  
Material Handling Systems Design  
Modeling, Design, Analysis, Operation, and Control of Manufacturing and Warehousing Systems  
Sustainability Issues in Manufacturing and Facility Logistics  
Design, Analysis, and Planning of Flexible Assembly Systems

## Refereed Publications<sup>1</sup>

Keserla, A. and B.A. Peters, “Analysis of Dual Shuttle Automated Storage/Retrieval Systems,” *Journal of Manufacturing Systems*, Vol. 13, No. 6, 1994, pp. 424–434.  
Wysk, R.A., B.A. Peters, and J.S. Smith, “A Formal Process Planning Schema for Shop Floor Control,” *Engineering Design and Automation*, Vol. 1, No. 1, 1995, pp. 3–19.  
Peters, B.A. and G.S. Subramanian, “Analysis of Partial Setup Strategies for Solving the Operational Planning Problem in Parallel Machine Electronic Assembly Systems,” *International Journal of Production Research*, Vol. 34, No. 4, 1996, pp. 999–1021.  
Peters, B.A., J.S. Smith, and S. Venkatesh, “A Control Classification of Automated Guided Vehicle Systems,” *International Journal of Industrial Engineering*, Vol. 3, No. 1, 1996, pp. 29–39.  
Peters, B.A., J.S. Smith, and T.S. Hale, “Closed Form Models for Determining the Optimal Dwell Point Location in Automated Storage and Retrieval Systems,” *International Journal of Production Research*, Vol. 34, No. 6, 1996, pp. 1757–1771.  
Peters, B.A. and M. Rajasekharan, “A Genetic Algorithm For Determining Facility Design and Configuration of Single Stage Flexible Electronic Assembly Systems,” *Journal of Manufacturing Systems*, Vol. 15, No. 5, 1996, pp. 316–324.  
Leon, V.J. and B.A. Peters, “Replanning and Analysis of Partial Setup Strategies in Printed Circuit Board Assembly Systems,” *International Journal of Flexible Manufacturing Systems*, Vol. 8, No. 4, 1996, pp. 389–412.

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<sup>1</sup> Citation Metrics: ISI Web of Knowledge: over 360 citations; h-index of 12  
Scopus: over 370 citations; h-index of 13  
Google Scholar: over 880 citations; h-index of 18

- Peters, B.A. and T. Yang, "Integrated Facility Layout and Material Handling System Design in Semiconductor Fabrication Facilities," *IEEE Transactions on Semiconductor Manufacturing*, Vol. 10, No. 3, 1997, pp. 360–369.
- Yang, T. and B.A. Peters, "A Spine Layout Design Method For Semiconductor Fabrication Facilities Containing Automated Material Handling Systems," *International Journal of Operations and Production Management*, Vol. 17, No. 5, 1997, pp. 490–501.
- Leon, V.J. and B.A. Peters, "A Comparison of Setup Strategies for Printed Circuit Board Assembly," *International Journal of Computers and Industrial Engineering*, Vol. 34, No. 1, 1998, pp. 219–234.
- Rajasekharan, M., B.A. Peters, and T. Yang, "A Genetic Algorithm for Facility Layout Design in Flexible Manufacturing Systems," *International Journal of Production Research*, Vol. 36, No. 1, 1998, pp. 95–110. (Received *Citation of Excellence* from ANBAR E.I.)
- Mahajan, S., B. Rao, and B.A. Peters, "A Retrieval Sequencing Heuristic for Miniload End-of-Aisle Automated Storage/Retrieval Systems," *International Journal of Production Research*, Vol. 36, No. 6, 1998, pp. 1715–1731.
- Yang, T. and B.A. Peters, "Flexible Machine Layout Design for Dynamic and Uncertain Production Environments," *European Journal of Operational Research*, Vol. 108, No. 1, 1998, pp. 49–64.
- Smith, J.S., B.A. Peters, and A. Srinivasan, "Job Shop Scheduling Considering Material Handling," *International Journal of Production Research*, Vol. 37, No. 7, 1999, pp. 1541–1560.
- Peters, B.A. and L.F. McGinnis, "Strategic Configuration of Flexible Assembly Systems: A Single Period Approximation," *IIE Transactions*, Vol. 31, No. 4, 1999, pp. 379–390.
- Yang, T., M. Rajasekharan, and B.A. Peters, "Semiconductor Fabrication Facility Design Using a Hybrid Search Methodology," *Computers and Industrial Engineering*, Vol. 36, No. 3, 1999, pp. 565–583.
- Peters, B.A. and L.F. McGinnis, "Modeling and Analysis of the Product Assignment Problem in Single Stage Electronic Assembly Systems," *IIE Transactions*, Vol. 32, No. 1, 2000, pp. 21–31.
- Rajasekharan, M. and B.A. Peters, "Strategic Configuration of Flexible Electronic Assembly Facilities Facing Stochastic Requirements," *International Journal of Production Research*, Vol. 38, No. 3, 2000, pp. 639–656.
- Castillo, I., S.A. Reyes, and B.A. Peters, "Modeling and Analysis of Tandem AGV Systems Using Generalized Stochastic Petri Nets," *Journal of Manufacturing Systems*, Vol. 20, No. 4, 2001, pp. 236–249.
- Smith, J.S., B.A. Peters, and G. Drake, "On-line Simulation for Manufacturing System Planning and Control," *Journal of Design and Manufacturing Automation*, Vol. 1, No. 3, 2001, pp. 207–220.
- Castillo, I. and B.A. Peters, "Unit Load and Material Handling Considerations in Facility Layout Design," *International Journal of Production Research*, Vol. 40, No. 13, 2002, pp. 2955–2989.
- Castillo, I. and B.A. Peters, "An Extended Distance-Based Facility Layout Problem," *International Journal of Production Research*, Vol. 41, No. 11, 2003, pp. 2451–2479.
- Curry, G.L., B.A. Peters, and M. Lee, "Queueing Network Model for a Class of Material-Handling Systems," *International Journal of Production Research*, Vol. 41, No. 16, 2003, pp. 3901–3920.
- Castillo, I. and B.A. Peters, "Integrating Design and Production Planning Considerations in Multi-Bay Manufacturing Facility Layout," *European Journal of Operational Research*, Vol. 157, No. 3, 2004, pp. 671–687.
- Yang, T., B.A. Peters, and M. Tu, "Layout Design for Flexible Manufacturing Systems Considering Single-Loop Directional Flow Patterns," *European Journal of Operational Research*, Vol. 164, 2005, pp. 440–455.

- Curry, J. and B.A. Peters, "Rescheduling Parallel Machines with Stepwise Increasing Tardiness and Machine Assignment Stability Objectives," *International Journal of Production Research*, Vol. 43, No. 15, 2005, pp. 3231–3246.
- Chae, J. and B.A. Peters, "A Simulated Annealing Algorithm Based On A Closed Loop Layout For Facility Layout Design In Flexible Manufacturing Systems," *International Journal of Production Research*, Vol. 44, No. 13, 2006, pp. 2561–2572.
- Chae, J. and B.A. Peters, "Layout Design of Multi-bay Facilities with Limited Bay Flexibility," *Journal of Manufacturing Systems*, Vol. 25, No. 1, 2006, pp. 1–11.
- Kuo, Y., T. Yang, B.A. Peters, and I. Chang, "Simulation Metamodel Development using Uniform Design and Neural Networks for Automated Material Handling Systems in Semiconductor Wafer Fabrication," *Simulation Modelling Practice and Theory*, Vol. 15, 2007, pp. 1002–1015.
- Hong, S., A.L. Johnson, and B.A. Peters, "Large-scale order batching in parallel-aisle picking systems," *IIE Transactions*, Vol. 44, No. 2, 2012, pp. 88–106.
- Sukhotu, V. and B.A. Peters, "Modeling of Material Handling Systems for Facility Design in Manufacturing Environments with Job-Specific Routing," *International Journal of Production Research*, to appear.  
(available online 18 Jan 2012 - [www.tandfonline.com/doi/abs/10.1080/00207543.2011.645512](http://www.tandfonline.com/doi/abs/10.1080/00207543.2011.645512))
- Hong, S., A.L. Johnson, and B.A. Peters, "Batch picking in narrow-aisle order picking systems with consideration for picker blocking," *European Journal of Operational Research*, to appear.

### ***Publications In Review/Revision***

- Hong, S., A.L. Johnson, and B.A. Peters, "A note on picker blocking models in parallel-aisle order picking systems," *IIE Transactions*, in 2<sup>nd</sup> review.
- Hong, S., A.L. Johnson, and B.A. Peters, "Analysis and control of picker blocking in a bucket brigade order picking," *Production and Operations Management*, in review.
- Sukhotu, V., and B.A. Peters, "General Block Layout Approach Using Nonlinear Root-finding Methods," *European Journal of Operational Research*, in revision.
- Botsali, A.R., G.A. Klutke, and B.A. Peters, "Analyzing Customer Flows on Grid Layout in Retail Facilities," *IIE Transactions*, in revision.

### **Refereed Conference Proceedings**

- Peters, B.A., "System Design and Product Assignment In Single Stage Flexible Assembly Systems," *Proceedings of the Second Industrial Engineering Research Conference*, Los Angeles, CA, May, 1993.
- Peters, B.A. and G.S. Subramanian, "Analysis of State Dependent Setup and Processing Times in a Parallel Machine Electronic Assembly System," *Proceedings of the Third Industrial Engineering Research Conference*, Atlanta, GA, May, 1994.
- Peters, B.A., "Economic Modeling of Automated Material Handling Systems in Semiconductor Wafer Fabrication Facilities," *Proceedings of the 1994 Material Handling Research Colloquium*, Grand Rapids, Michigan, June, 1994.
- Peters, B.A., J.S. Smith, R.A. Wysk, and R.L. Disney, "MODELWORLD: A Manufacturing Systems Research Test Facility," *Proceedings of the 1994 ASME Winter Annual Meeting – Computer Integrated Concurrent Design*, Chicago, IL, November, 1994.
- Edlabadkar, A., B.A. Peters, and J.S. Smith, "Design of a Generic, Real Time Material Transport Control System," *Proceedings of the Congress on Intelligent Manufacturing Processes and Systems*, Mayaguez, Puerto Rico, February, 1995.

- Drake, G.R., J.S. Smith, and B.A. Peters, "Simulation as a Planning and Scheduling Tool for Flexible Manufacturing Systems," *Proceedings of the 1995 Winter Simulation Conference*, Washington, DC, December, 1995.
- Peters, B.A. and T. Yang, "Facility Layout and Material Handling Systems Design Integration in Manufacturing Systems," *Proceedings of the 1996 International Material Handling Research Colloquium*, s'Hertogenbosch, The Netherlands, June, 1996.
- Peters, B.A., J.S. Smith, J. Curry, C. LaJimodiere, and G.R. Drake, "Simulation Based Scheduling and Control," *Proceedings of the 1996 Winter Simulation Conference*, San Diego, CA, December, 1996.
- Smith, J.S. and B.A. Peters, "Simulation as a Decision-Making Tool for Real-time Control of Flexible Manufacturing Systems," *Proceedings of the 1998 IEEE Conference on Robotics and Automation*, Brussels, Belgium, April, 1998.
- Jordan, S.E., M.K. Snell, M.A. Madsen, B.A. Peters, and J.S. Smith, "Simulation Based Design and Analysis of Physical Protection Systems," *Proceedings of the 1998 Winter Simulation Conference*, Washington, DC, December, 1998.
- Smith, J.S., B.A. Peters, S.E. Jordan, and M.K. Snell, "Distributed Real-time Simulation for Intruder Detection System Analysis," *Proceedings of the 1999 Winter Simulation Conference*, Washington, DC, December, 1999, pp. 1168-1173.
- Peters, B.A., and V. Sukhotu, "A Rectangular Block Layout Approach for Facility Design," *Proceedings of the 17<sup>th</sup> International Conference on Production Research*, Blacksburg, VA, August, 2003.
- Botsali, A.R., and B.A. Peters, "A Network Based Layout Design Model for Retail Stores," *Industrial Engineering Research Conference Proceedings*, Atlanta, GA, May, 2005. (Awarded *Best Paper* in Facilities Planning and Design track.)

## **Edited Books**

- Progress in Material Handling Practice: 1999, editors: G.R. Forger, S.S. Heragu, M.A. Hernan, B.A. Peters, G.D. Taylor, and J.S. Usher, Material Handling Institute, Charlotte, NC, 2000.
- Progress in Material Handling Research: 2000, editors: R.J. Graves, L.F. McGinnis, M.K. Ogle, B.A. Peters, R.W. Ward, and M.R. Wilhelm, Material Handling Institute, Charlotte, NC, 2001.
- Progress in Material Handling Practice: 2001, editors: G.R. Forger, S.S. Heragu, M.A. Hernan, M.G. Kay, B.A. Peters, and G.D. Taylor, Material Handling Institute, Charlotte, NC, 2001.
- Proceedings of the 2001 Winter Simulation Conference, editors: B.A. Peters, J.S. Smith, D.J. Medeiros, and M.W. Rohrer, IEEE, Piscataway, NJ, 2001.
- Progress in Material Handling Research: 2002, editors: R.D. Meller, M.K. Ogle, B.A. Peters, G.D. Taylor, and J.S. Usher, Material Handling Institute, Charlotte, NC, 2002.
- Progress in Material Handling Research: 2004, editors: R.D. Meller, M.K. Ogle, B.A. Peters, G.D. Taylor, and J.S. Usher, Material Handling Institute, Charlotte, NC, 2004.
- Proceedings of the 2004 Winter Simulation Conference, editors: R.G. Ingalls, M.D. Rossetti, B.A. Peters, and J.S. Smith, IEEE, Piscataway, NJ, 2004.
- Progress in Material Handling Research: 2006, editors: R.D. Meller, M.K. Ogle, B.A. Peters, G.D. Taylor, and J.S. Usher, Material Handling Institute, Charlotte, NC, 2006.
- Progress in Material Handling Research: 2008, editors: K.P. Ellis, R.D. Meller, M.K. Ogle, B.A. Peters, G.D. Taylor, and J.S. Usher, Material Handling Insitute, Charlotte, NC 2008.

## Edited Book Chapters

- Bakkalbasi, O., D.C. Gong, B.A. Peters, M. Goetschalckx, and L.F. McGinnis, "An Integrated Engineering Workstation for Automated Guided Vehicle Systems Design," People and Product Management in Manufacturing, J.A. Edosomwan (ed), Elsevier, 1990, pp. 193-210.
- Peters, B.A., "Economic Modeling of Automated Material Handling Systems in Semiconductor Wafer Fabrication Facilities," Progress in Material Handling Research: 1994, R.J. Graves, L.F. McGinnis, D.J. Medeiros, R.W. Ward, and M.R. Wilhelm (editors), 1995, pp. 409-430.
- Peters, B.A. and T. Yang, "Facility Layout and Material Handling Systems Design Integration in Manufacturing Systems," Progress in Material Handling Research: 1996, R.J. Graves, L.F. McGinnis, D.J. Medeiros, R.W. Ward, and M.R. Wilhelm (editors), 1997, pp. 467-482.
- Peters, B.A. and T. Yang, "Combined Graph Theory and Integer Programming Approaches for Facility Design Problems," Progress in Material Handling Research: 1998, R.J. Graves, L.F. McGinnis, D.J. Medeiros, R.W. Ward, and M.R. Wilhelm (editors), 1999, pp. 425-449.
- Peters, B.A. and J.S. Smith, "Dynamic Slotting of the Forward Picking Area in a Retail Distribution Center," Progress in Material Handling Research: 2000, R.J. Graves, L.F. McGinnis, M.K. Ogle, B.A. Peters, R.W. Ward, and M.R. Wilhelm (editors), 2001, pp. 267-278.
- Castillo, I. and B.A. Peters, "Concurrent Consideration of Layout Design and Product Flow Allocations in Multi-Bay Manufacturing Facilities," Progress in Material Handling Research: 2002, R.D. Meller, M.K. Ogle, B.A. Peters, G.D. Taylor, and J.S. Usher (editors), 2002, pp. 103-116.
- Peters, B.A. and V. Sukhotu, "Modeling of Material Handling Systems in Manufacturing Environments with Multiple Job Types," Progress in Material Handling Research: 2002, R.D. Meller, M.K. Ogle, B.A. Peters, G.D. Taylor, and J.S. Usher (editors), 2002, pp. 381-404.
- Peters, B.A., G.A. Klutke, and A.R. Botsali, "Research Issues in Retail Facility Layout Design," Progress in Material Handling Research: 2004, R.D. Meller, M.K. Ogle, B.A. Peters, G.D. Taylor, and J.S. Usher (editors), 2004, pp. 399-414.
- Chae, J. and B.A. Peters, "Integration of Flow-Based Department Formation into Facility Layout Design," Progress in Material Handling Research: 2006, R.D. Meller, M.K. Ogle, B.A. Peters, G.D. Taylor, and J.S. Usher (editors), 2006 pp. 43-72.
- Peters, B.A. and A. Jalora, "ASRS Design Under Service Level Constraints," Progress in Material Handling Research: 2006, R.D. Meller, M.K. Ogle, B.A. Peters, G.D. Taylor, and J.S. Usher (editors), 2006, pp. 355-364.
- S. Hong, A.L. Johnson, and B.A. Peters, "Analysis of Picker Blocking in Narrow-Aisle Batch Picking," Progress in Material Handling Research: 2010, K. Ellis, K. Gue, R. de Koster, R.D. Meller, B. Montreuil, M.K. Ogle, 2010, pp. 366-378.
- Peters, B.A., "Understanding and Modeling Sustainability Issues in Facility Logistics," Progress in Material Handling Research: 2012, to appear.

## Conference Proceedings

- Bakkalbasi, O., D.C. Gong, B.A. Peters, M. Goetschalckx, and L.F. McGinnis, "An Integrated Engineering Workstation for Automated Guided Vehicle Systems Design," *Proceedings of the 13<sup>th</sup> Annual International Computer Software and Applications Conference*, Orlando, FL, September 1989.
- Wysk, R.A., R.L. Disney, B.A. Peters, J.S. Smith, T.K. Kumaran, S. Lee, S. Hur, and A. Edlabadkar, "MODELWORLD: An Open System for Manufacturing Systems Analysis," *Proceedings of the 1994 NSF Design and Manufacturing Grantees Conference*, Cambridge, MA, January, 1994.

- Peters, B.A., “Economic Analysis of the Strategic Benefits of Automated Material Handling Systems in Semiconductor Manufacturing,” *Proceedings of the International Mechanical Engineering Congress and Exposition—Materials Handling Engineering*, Chicago, IL, November, 1994.
- Peters, B.A. and V.S. Saravana, “Strategic Planning and Analysis of Flexible Assembly Systems with Time-Varying Production Requirements,” *Proceedings of the 1995 NSF Design and Manufacturing Grantees Conference*, San Diego, CA, January, 1995.
- Joshi, S.B., J.S. Smith, R.A. Wysk, B.A. Peters, and C.D. Pegden, “RapidCIM: An Approach to Rapid Development of Control Software for FMS Control,” *Proceedings 27<sup>th</sup> CIRP International Seminar on Manufacturing Systems*, Ann Arbor, MI, May 1995.
- Schorn, E.C., R. Liquigan, B.A. Peters, and J.S. Smith, “Development of an Intelligent Scheduler for Semiconductor Manufacturing Facilities,” *Proceedings of the Advanced Semiconductor Manufacturing Conference*, Boston, MA, November, 1995.
- Peters, B.A., V.S. Saravana, and M. Rajasekharan, “Strategic Planning and Analysis of Flexible Assembly Systems with Time-Varying Production Requirements,” *Proceedings of the 1996 NSF Design and Manufacturing Grantees Conference*, Albuquerque, NM, January, 1996.
- Peters, B.A. and J.S. Smith, “Development of a Modeling Studio for Intelligent Manufacturing Systems Analysis,” *Proceedings of the 1996 NSF Design and Manufacturing Grantees Conference*, Albuquerque, NM, January, 1996.
- Peters, B.A., V.S. Saravana, and M. Rajasekharan, “Strategic Planning and Analysis of Flexible Assembly Systems with Time-Varying Production Requirements,” *Proceedings of the 1997 NSF Design and Manufacturing Grantees Conference*, Seattle, WA, January, 1997.
- Smith, J.S., B.A. Peters, J. Curry, and D. Gupta, “Prototype Software Model for Designing Intruder Detection Systems with Simulation,” *Proceedings of SPIE '98*, Orlando, FL, April, 1998.
- Peters, B.A. and J.S. Smith, “Real-time, Simulation-based Shop Floor Control,” *Proceedings of ArenaSphere '98*, Pittsburgh, PA, June, 1998.
- Ogle, M., R. Lindeke, B. Peters, and J. Usher, “College/Industry Relationships in Support of the Material Handling Industry,” *Proceedings of the 2001 Conference for Industry and Education Collaboration*, San Diego, CA, January, 2001.
- Jordan, S.E., M.K. Snell, B.A. Peters, and J.S. Smith, “Next Generation Security Simulation,” *Proceedings of the 43<sup>rd</sup> Institute for Nuclear Materials Management Annual Meeting*, July, 2002.

## **Other Publications/Technical Reports**

- Peters, B.A. and L.F. McGinnis, “An Automated Guided Vehicle System for a Warehousing Operation,” Educational Case Study for CICMHE and The Material Handling Institute, Charlotte, NC, 1990.
- Peters, B.A. and L.F. McGinnis, “Conceptual Model of an Engineering Workstation,” *MHRC Technical Report*, Material Handling Research Center, Georgia Institute of Technology, 1991.
- Peters, B.A., T.S. Hale, F.M. Traylor, and T. Yang, “A Comprehensive Cost/Benefit Model for Interbay Material Handling Systems in Wafer Fabrication Facilities,” *SEMATECH Technical Report 93081757A-ENG*, August, 1993.
- Malave, C.O., V.J. Leon, and B.A. Peters, “Operational Planning of Electronic Assembly Lines,” *Final Report*, Program for Automation in Manufacturing, Texas A&M University, August, 1993.
- Phillips, D.T., G.L. Curry, B.L. Deuermeyer, and B.A. Peters, “Texas Center of Excellence, Texas A&M University Manufacturing Systems Research – Final Report,” SEMATECH/SRC Contract No. 92-MC-506, *Final Report*, September, 1993.

- Wysk, R.A., R.L. Disney, B.A. Peters, J.S. Smith, T.K. Kumaran, S. Lee, S. Hur, and A. Edlabadkar, "MODELWORLD: An Open System for Manufacturing Systems Analysis," *Industrial Engineering*, Vol. 26, No. 7, July, 1994, pp. 49-54.
- Phillips, D.T., G.L. Curry, B.L. Deuermeyer, B.A. Peters, and J.S. Smith, "Texas Center of Excellence, Texas A&M University Manufacturing Systems Research – Final Report," SEMATECH/SRC Contract No. 92-MC-506, *Final Report*, September, 1994.
- Smith, J.S., B.A. Peters, R.A. Wysk, and R.L. Disney, "MODELWORLD: An Open Environment for Collaborative Manufacturing Research," *OR/MS Today*, October, 1994, pp. 32-37.
- Phillips, D.T., G.L. Curry, B.L. Deuermeyer, B.A. Peters, and J.S. Smith, "Texas Center of Excellence, Texas A&M University Manufacturing Systems Research – Progress Report," SEMATECH/SRC Contract No. 92-MC-506, *Progress Report*, April, 1995.
- Peters, B.A., C. Malmberg, G. Petrina, D. Pratt, and G.D. Taylor, "An Introduction to Material Handling Equipment Selection," *CICMHE Technical Report*, Material Handling Institute, March, 1998.
- Peters, B.A., "Grand Challenges for Small Batch Production," *Assembly Automation*, Vol. 20, No. 3, 2000, pp. 198-199.

## Conference Presentations

- Peters, B.A., "The Strategic Choice Between Focused and Nonfocused Configurations for Flexible Assembly Systems in the Electronics Industry," *ORSA/TIMS*, San Francisco, CA, November, 1992.
- Peters, B.A., "Design, Analysis, and Justification of Automated Material Handling Systems in the Semiconductor Industry," *Second Industrial Engineering Research Conference*, Los Angeles, CA, May, 1993.
- Peters, B.A., "Design and Analysis of Flexible Electronic Assembly Systems," *ORSA/TIMS*, Phoenix, AZ, November, 1993.
- Peters, B.A., J.S. Smith, R.A. Wysk, and R.L. Disney, "MODELWORLD: An Open System for Manufacturing Systems Analysis," *ORSA/TIMS*, Phoenix, AZ, November, 1993.
- Leon, V.J., C.O. Malave, and B.A. Peters, "Operational Planning of Electronic Assembly Systems," *ORSA/TIMS*, Phoenix, AZ, November, 1993.
- Peters, B.A. and V.J. Leon, "Operational Planning of Flexible Electronic Assembly Lines," *Second Annual Border Conference on Manufacturing and the Environment*, El Paso, TX, May, 1994.
- Peters, B.A. and V.J. Leon, "Analysis of Partial Setup Strategies for Electronic Assembly Systems," *ORSA/TIMS*, Detroit, MI, October, 1994.
- Peters, B.A. and V.S. Saravana, "Analysis of Facility Configuration and Product Assignment Decisions in Electronic Assembly Systems," *ORSA/TIMS*, Detroit, MI, October, 1994.
- Peters, B.A., "Economic Modeling of Automated Material Handling Systems in Semiconductor Wafer Fabrication Facilities," *Fourth Industrial Engineering Research Conference*, Nashville, TN, May, 1995.
- Joshi, S.B., J.S. Smith, B.A. Peters, R.A. Wysk, and C.D. Pegden, "Experience with Simulation for Task Generation in Real Time Control of Flexible Manufacturing Systems," *INFORMS*, Singapore, June, 1995.
- Peters, B.A. and T. Yang, "Flexible Machine Layout Design," *IFORS Conference on Operations Research and Engineering Design*, St. Louis, MO, October, 1995.
- Yang, T. and B.A. Peters, "A Combined Adjacency Graph/Quadratic Assignment Procedure for Solving the Facility Layout Problem in Flexible Manufacturing Systems," *INFORMS*, New Orleans, LA, October, 1995.



- Leon, V.J. and B.A. Peters, "Partial Setup Strategy for Printed Circuit Board Assembly," *INFORMS*, New Orleans, LA, October, 1995.
- Smith, J.S. and B.A. Peters, "Analytical Models for the Dwell Point Location Problem in Automated Storage/Retrieval Systems," *INFORMS*, New Orleans, LA, October, 1995.
- Leon, V.J. and B.A. Peters, "Comparison of Setup Strategies in Printed Circuit Board Assembly," *INFORMS*, Washington, DC, May, 1996.
- Rajasekharan, M. and B.A. Peters, "Design and Configuration of Flexible Manufacturing Facilities Facing Stochastic Requirements," *Fifth Industrial Engineering Research Conference*, Minneapolis, MN, May 1996.
- Peters, B.A. and J.S. Smith, "Manufacturing System Design Using Virtual Prototypes," *Fifth Industrial Engineering Research Conference*, Minneapolis, MN, May 1996.
- Saravana, V.S. and B.A. Peters, "Strategic Planning of Flexible Assembly Systems in the Electronics Industry," *Fifth Industrial Engineering Research Conference*, Minneapolis, MN, May 1996.
- Rajasekharan, M. and B.A. Peters, "An Integrated Framework for Strategic Design and Configuration of Flexible Manufacturing Facilities," *INFORMS*, Atlanta, GA, November 1996.
- Whitaker, L., V.J. Leon, and B.A. Peters, "Integration of Quality and Maintenance Activities in SMD Assembly," *INFORMS*, Atlanta, GA, November 1996.
- Peters, B.A. and T. Yang, "Integrated Facility Layout and Material Handling System Design in Semiconductor Fabrication Facilities," *Sixth Industrial Engineering Research Conference*, Miami, FL, May, 1997.
- Smith, J.S. and B.A. Peters, "Development of a Simulation-Based Control System for Flexible Manufacturing Systems," *IEEE 6<sup>th</sup> International Conference on Emerging Technologies in Factory Automation*, Los Angeles, CA, September 1997.
- Rajasekharan, M. and B.A. Peters, "Strategic Reconfiguration of Agile Electronics Enterprises," *INFORMS*, Dallas, TX, October 1997.
- Peters, B.A., J.S. Smith, and R. Rajagopalan, "Operations Scheduling in Flexible Manufacturing Systems," *Industrial Engineering Research Conference*, Phoenix, AZ, May 1999.
- Peters, B.A. and J. Chae, "A Simulated Annealing Algorithm for Closed Loop Layout Design of Flexible Manufacturing Systems," *Industrial Engineering Research Conference*, Cleveland, OH, May 2000.
- Smith, J.S. and B.A. Peters, "Dynamic Reslotting for Distribution Center Picking Operations," *Industrial Engineering Research Conference*, Cleveland, OH, May 2000.
- Castillo, I., S.A. Reyes, and B.A. Peters, "Modeling and Analysis of Tandem AGV Systems Using Petri Nets," *INFORMS*, San Antonio, TX, November 2000.
- Peters, B.A. and T. Yang, "Dynamic Layout Design in Flexible Manufacturing Systems," *INFORMS*, San Antonio, TX, November 2000.
- Peters, B.A. and J.S. Smith, "Dynamic Reslotting for a Distribution Center Picking Operation," *INFORMS*, San Antonio, TX, November 2000.
- Castillo, I. and B.A. Peters, "Integrating Material Handling Operational Decisions with Facility Layout Design," *Industrial Engineering Research Conference*, Dallas, TX, May 2001.
- Chang, P.Y. and B.A. Peters, "Analysis and Design of Multi-Channel Manufacturing Systems," *INFORMS*, Miami, FL, November 2001.
- Peters, B.A. and I. Castillo, "The Distributed Multi-Bay Manufacturing Facility Layout Problem," *INFORMS*, Miami, FL, November 2001.
- Peters, B.A. and J. Chae, "Layout Design of Multi-bay Facilities with Limited Bay Flexibility," *Industrial Engineering Research Conference*, Portland, OR, May 2003.

- Jalora, A. and B.A. Peters, "Cluster Based Inbound Trailer Allocation at a Crossdock Facility," *Industrial Engineering Research Conference*, Houston, TX, May 2004.
- Peters, B.A. and A. Jalora, "Design of Reconfigurable Manufacturing Systems," *Industrial Engineering Research Conference*, Houston, TX, May 2004.
- Peters, B.A., and V. Sukhotu, "New Approaches for Generating Rectangular Block Layout Designs," *INFORMS*, Denver, CO, October, 2004.
- Jalora, A. and B.A. Peters, "AS/RS Design for Consolidating Orders," *INFORMS*, Denver, CO, October, 2004.
- Botsali, A.R., B.A. Peters, and G.A. Klutke, "Grid Layout Design for Retail Stores," *INFORMS*, San Francisco, CA, November 2005.
- Jalora, A. and B.A. Peters, "Design, Layout and Operations at a Cross-docking Facility," *INFORMS*, San Francisco, CA, November 2005.
- Jalora, A. and B.A. Peters, "Order Acceptance at a Make-to-Order Manufacturing Facility," *INFORMS*, San Francisco, CA, November 2005.
- Peters, B.A., "Vehicle Systems Modeling," *Material Handling Teachers' Institute*, Quebec City, Quebec, Canada, June, 2005.
- Botsali, A.R., G.A. Klutke, and B.A. Peters, "Retail Store Layout Design with Stochastic Product Demand," *INFORMS*, Pittsburgh, PA, November 2006.
- Ragab, A. and B.A. Peters, "A Novel Primal Decomposition Approach for the Supply Chain Network Design Problem under Uncertainty," *INFORMS*, Pittsburgh, PA, November 2006.
- Hong, S. and B.A. Peters, "Order Batching and Vehicle Selection in a Parallel-aisle Warehouse with Time Constraints," *INFORMS*, Seattle, WA, November 2007.
- Hong, S., A.L. Johnson, and B.A. Peters, "A Large-scale Order Batching Model for Narrow-aisle Picking Systems with Traversal Routing Methods," *INFORMS*, San Diego, CA, October 2009.
- Hong, S., A.L. Johnson, and B.A. Peters, "Analysis of Picker Blocking in Bucket-Brigade Order Picking Systems," *INFORMS*, Austin, TX, November 2010.
- Johnson, A.L., S. Hong, and B.A. Peters, "Batch Picking in Narrow-aisle Order Picking Systems with Consideration for Picker Blocking," *Industrial and Systems Engineering Research Conference*, Orlando, FL, May 2012.

## **Funded Research and Education Projects**

*Title:* A Comprehensive Cost/Benefit Model for Wafer Fabrication Facilities Containing Fully or Partially Automated Material Handling Systems

*P.I.s:* B.A. Peters and D.T. Phillips

*Funding:* SEMATECH; \$65,000; Sept. 1992 – Aug. 1993

*Title:* Operational Planning of Electronic Assembly Lines

*P.I.s:* C.O. Malave, B.A. Peters, and V.J. Leon

*Funding:* Program for Automated Manufacturing (TAMU); \$26,498; Sept. 1992 – Aug. 1993

*Title:* Texas A&M SEMATECH Center of Excellence – Cost Analysis and Design of Interbay/Intrabay Material Handling Systems

*P.I.s:* D.T. Phillips, B. Deuermeyer, G. Curry, and B.A. Peters

*Funding:* SRC/SEMATECH; \$240,000; Nov. 1992 – Oct. 1993

*Title:* Development of a Modeling Studio for Intelligent Manufacturing Systems Analysis

*P.I.s:* R.A. Wysk and R.L. Disney; *Research Staff:* B.A. Peters and J.S. Smith

*Funding:* National Science Foundation; \$30,000; Mar. 1993 – Sept. 1993

*Title:* Strategic Analysis and Planning of Flexible Assembly Systems Under Time-Varying Production Requirements

*P.I.:* B.A. Peters

*Funding:* National Science Foundation — Research Initiation Award; \$90,000; Sept. 1993 – Aug. 1997

*Title:* Texas A&M SEMATECH Center of Excellence – Cost Analysis and Design of Automated Material Handling Systems

*P.I.s:* D.T. Phillips, G. Curry, B. Deuermeyer, and B.A. Peters

*Funding:* SRC/SEMATECH; \$240,000; Nov. 1993 – Oct. 1994

*Title:* Development of an Intelligent Material Handling Control System for Semiconductor Manufacturing Facilities

*P.I.s:* J.S. Smith and B.A. Peters

*Funding:* SEMATECH; \$88,908; May 1994 – Aug. 1995

*Title:* MODELWORLD: An Open System For Manufacturing Systems Analysis

*P.I.s:* B.A. Peters, J.S. Smith, R.L. Disney, and R.A. Wysk

*Funding:* National Science Foundation; \$42,588; Sept. 1994 – Aug. 1996

*Title:* Texas A&M SEMATECH Center of Excellence – Modeling, Analysis, and Design of Automated Material Handling Systems

*P.I.s:* D.T. Phillips, G. Curry, B. Deuermeyer, B.A. Peters, and J.S. Smith

*Funding:* SRC/SEMATECH; \$220,000; Nov. 1994 – Oct. 1995

*Title:* Rapid Prototyping of Shop Floor Control for Computer Integrated Manufacturing

*P.I.s:* J.S. Smith and B.A. Peters

*Funding:* ARPA (subcontract through Penn State); \$110,000; June 1995 – May 1996

*Title:* Center for Electronics Manufacturing

*P.I.s:* J.R. Villalobos and T.J. McLean (*Project Directors*)

*Funding:* US Army Communications Command; \$2,300,000; Oct. 1995 – Sept. 1999

*Note 1:* This was a multi-university center with involvement from University of Texas El Paso, Texas A&M University, and Georgia Institute of Technology.  
*Co-P.I.s* on the Texas A&M contract are V.J. Leon, B.A. Peters, J.S. Smith, R.A. Volz, and C.O. Malave which was for \$576,158.

*Note 2:* This project was awarded, but budget cuts prevented funding beyond the first year.

*Title:* Unrestricted gift to Industrial Engineering Dept. in support of Taho Yang's research

*P.I.:* B.A. Peters

*Funding:* Semiconductor Research Corporation; \$13,700; Nov. 1995

*Title:* Assessment of Simulation Based Analysis, Prediction, and Control in Jet Engine Repair and Maintenance Facilities

*P.I.s:* B.A. Peters and J.S. Smith

*Funding:* Tracor, Inc.; \$5,000; Jan. 1996 – Dec. 1996

*Title:* Simulation Modeling for Shop Floor Control of Engine Repair Facilities

*P.I.s:* B.A. Peters and J.S. Smith

*Funding:* Tracor, Inc.; \$10,000; Mar. 1996 – Aug. 1996

*Title:* Center for Electronics Manufacturing Systems Planning Grant

*P.I.s:* V.J. Leon, B.A. Peters, and J.S. Smith

*Funding:* TEES Strategic Research Initiative; \$52,830; June 1996 – Sept. 1997

*Title:* Use of Simulation-Based Analysis, Prediction, and Control in Remanufacturing Facilities  
*P.I.s:* J.S. Smith and B.A. Peters  
*Funding:* DARPA; \$186,813; June 1996 – Dec. 2000

*Title:* Short-term Scheduling Using Discrete Event Simulation  
*P.I.s:* B.A. Peters and J.S. Smith  
*Funding:* Southwestern Bell Technology Resources, Inc.; \$10,000; Sept. 1996 – Dec. 1996

*Title:* Simulation Based Design and Control of Intruder Detection Systems  
*P.I.s:* J.S. Smith and B.A. Peters  
*Funding:* Sandia National Laboratories; \$208,163; Feb. 1997 – Sept. 1999

*Title:* Development of a Pick Face Assignment Methodology  
*P.I.s:* J.S. Smith and B.A. Peters  
*Funding:* J.C. Penney; \$22,300; Sept. 1998 – Dec. 1998

*Title:* Pathfinder: Phase I  
*P.I.s:* D.T. Phillips, B.A. Peters, and J.S. Smith  
*Funding:* Knowledge Based Systems, Inc. (Prime: US Air Force); \$102,820; May 1999 – Dec. 1999

*Title:* Simulation Based Design and Control of Intruder Detection Systems  
*P.I.s:* B.A. Peters and J.S. Smith  
*Funding:* Sandia National Laboratories; \$112,949; Oct. 1999 – Sept. 2000

*Title:* Simulation Based Design and Control of Intruder Detection Systems  
*P.I.s:* B.A. Peters, J.S. Smith, and A. Banerjee  
*Funding:* Sandia National Laboratories; \$171,000; Oct. 2000 – Sept. 2002

*Title:* Exploratory Research: A New Paradigm for the Design of Retail Facilities  
*P.I.s:* B.A. Peters and G.A. Klutke  
*Funding:* National Science Foundation; \$150,000; Sept. 2002 – Feb. 2005

*Title:* Simulation Based Design and Control of Intruder Detection Systems  
*P.I.s:* B.A. Peters and A. Banerjee  
*Funding:* Sandia National Laboratories; \$200,000; Oct. 2002 – Sept. 2005

*Title:* Masters Degree for Project Managers  
*P.I.s:* B.A. Peters, D.N. Ford, K.F. Reinschmidt, and D.R. Smith  
*Funding:* Parsons Engineering Sciences, Inc.; \$125,415; Aug. 2006 – Aug. 2007

*Title:* Masters Degree for Project Managers  
*P.I.s:* B.A. Peters, D.N. Ford, D.S. Lee, and D.R. Smith  
*Funding:* Parsons Engineering Sciences, Inc; \$127,234; Aug. 2007 – Aug. 2009

*Title:* Continuing Education Course Delivery for Project Managers  
*P.I.s:* B.A. Peters and M.S. Mannan  
*Funding:* Parsons Engineering Sciences, Inc; \$103,635; Jun. 2009 – Aug. 2010

*Title:* **Proposal for** Planning Grant: I/UCRC for Excellence in Distribution and Logistics  
*P.I.s:* B.A. Peters  
*Funding:* National Science Foundation; \$10,000; **Pending** (submitted Mar. 6, 2012)

## Equipment Grants

Grant to Purchase Equipment for the Manufacturing Systems Lab; C.O. Malave, J.S. Smith, B.A. Peters, and V.J. Leon; Source: Engineering Access Fee Committee, TAMU; Nov. 1992; \$40,000.

Donation of a Flexible Conveyor System for the TAMU CIM Lab; B.A. Peters; from Shuttleworth, Inc.; June 1993; \$199,475.

Donation of Saber<sup>®</sup> Simulator Software License; B.A. Peters; from Analogy, Inc.; Sept. 1993; \$750,000 (15 floating licenses valued at \$50,000 each).

Grant to Purchase Equipment for the Manufacturing Systems Lab; J.S. Smith and B.A. Peters; Source: Engineering Access Fee Committee, TAMU; May 1994; \$6,500.

Donation of Programmable Logic Controller Hardware and Operating, Communication, and Development Software; B.A. Peters; from AEG Schneider Automation (Modicon, Inc.); Nov. 1994; \$18,320.

Donation of Programmable Logic Controller Hardware, Software, and Communication Module; B.A. Peters; from Allen-Bradley, A Division of Rockwell Automation; Dec. 1996; \$17,250.

Grant to Purchase Computer Equipment for Facility Design Teaching Lab; B.A. Peters; Source: Engineering Access Fee Committee, TAMU; Feb. 2000; \$65,300.

Matching Equipment Donation of 6 Computer Workstations for a Virtual Design Lab; A. Banerjee and B.A. Peters; from Sun Corporation; Aug. 2000; \$12,000.

## Courses Developed/Taught

INEN 220 — Introduction to Manufacturing and Production Systems  
(involved in design and initial offerings)

INEN 316 — Manufacturing Systems Planning and Control

INEN 416 — Facility Location, Layout Design, and Material Handling  
(involved in significant restructuring and enhancement)

INEN 459 — Industrial Engineering Senior Capstone Design  
(involved in design and initial offerings)

INEN 601 — Facilities Location and Logistics  
(involved in initial revitalization and restructuring)

INEN 605 — Material Handling Systems  
(involved in significant restructuring and enhancement)

INEN 654 — Manufacturing Systems Design and Analysis  
(involved in restructuring and initial design for distance learning delivery)

INEN 659 — Advanced Modeling and Analysis of Manufacturing Systems  
(involved in design and initial offering)

INEN 681 — Manufacturing Systems Seminar; *Parsons* Graduate Seminar Series

## Student Advising

### *Doctor of Philosophy*

Taho Yang, “Integrated Facility Layout and Material Handling System Design in Flexible Manufacturing Systems,” Ph.D., August 1996. (Employed by National Cheng Kung University (currently as Professor) in Tainan, Taiwan)

Vikrant Saravana, “Strategic Planning of Flexible Assembly Systems for the Electronics Industry,” Ph.D., December 1996. (Employed by Motorola, Inc.)

Annap Derebail, “An Integrated Approach to Intermediate Planning of Manufacturing Operations with Sequence Dependent Setups,” Ph.D., (co-advisor: D.T. Phillips), August 1997. (Employed by IBM)

Maheswaran Rajasekharan, "Strategic Planning of Agile Assembly Systems for Electronics Industry," Ph.D., December 1997. (Initially employed by i2 Technologies; currently Managing Partner at Globe Equity Partners)

Ignacio Castillo, "Concurrent Consideration of Design and Operational Issues in Manufacturing Facility Layout," Ph.D., December 2001. (Initially employed by University of Laval; currently Associate Professor at Wilfrid Laurier University in Waterloo, Canada)

Ping-Yu Chang, "Analysis and Design of Multi-Channel Manufacturing Systems," Ph.D., August 2002. (Employed by Mingchi Institute of Technology, Taiwan)

Vatcharapol Sukhotu, "Material Handling System Models and Block Layout Approaches for Facility Design," Ph.D., December 2002. (Initially employed by Thai Petroleum, Thailand; currently Assistant Professor, School of Management, Asian Institute of Technology, Thailand)

James C. Curry, "A Simulation Study Of Methodologies For Controlling Nervousness In Parallel Machine Scheduling Problems," Ph.D., December 2003. (Initially employed by Vector Logistics, A Consolidated Freightways Company; currently Assistant Professor of Industrial Engineering at Lamar University)

Junjae Chae, "Concurrent Design of Facility Layout and Flow-Based Department Formation," Ph.D., December 2003. (Initially employed by Samsung Electronics, Korea; currently Professor in School of Air Transport, Transportation, and Logistics at Korea Aerospace University)

Anshu Jalora, "Order Acceptance and Scheduling at a Make-to-Order System Using Revenue Management," Ph.D., August 2006. (Initially employed by PROS Revenue Management; currently Associate Professor at Narsee Monjee Institute of Management Studies (NMIMS) in Mumbai, India)

Ahmet Reha Botsali, "Retail Facility Layout Design," Ph.D. (co-advisor: G.A. Klutke), May 2007. (Employed by Scientific and Technological Research Council of Turkey, Ankara, Turkey)

Soondo Hong, "Improved Batch-picking In Narrow-aisle Order Picking Systems Considering Picker Blocking," Ph.D. (co-advisor: A.L. Johnson), August 2010 (Employed by Samsung, Korea).

Ayman Ragab, "Supply Chain Network Design under Uncertain and Dynamic Demand," Ph.D., December 2010. (Employed by Amazon.com, Global Transportation Strategy, Seattle)

Jason Clepper, Ph.D., tbd (passed preliminary exam, April 2009).

Served on 23 Ph.D. Committees, plus 4 as Graduate Council Representative, and 1 D.E. Committee.

### ***Master of Science***

Gowri Shankar Subramanian, "Operational Planning of Electronic Assembly Systems in the Presence of State Dependent Setup and Processing Times," Master's Thesis, May 1994.

Chih-Huei Lee, "Factor Analysis to Determine Facility Configuration of a Flexible Electronics Assembly System with Single Period Requirements," Master's Project, May 1994.

Abhay Edlabadkar, "Framework For A Flexible, Real-Time Controller For Automated Material Transport Systems," Master's Thesis, (co-advisor: J.S. Smith), May 1995.

Nagendra Annadanam, "A Simulation Approach to Designing Robust Manufacturing Systems," Master's Project, August 1995.

Jami Gwen Prigge, "Flexible Facility Layout Design with Stochastic Data in Multiple Periods" Master's Thesis, May 1996.

Fredrick Mark Traylor, "Cost of Ownership and Operation in Semiconductor Manufacturing," Master's Project, (co-advisor: D.T. Phillips), May 1996.

Myrrah Mikell Gatlin, Masters (non-thesis), December 1997.

Dinesh Gupta, Masters (non-thesis), May 1999.

Junjae Chae, “Closed Loop Layout Design for Flexible Manufacturing Systems”, Master’s Project, August 1999.

Shubhakar Rao, “A Simulation Model for Inventory Control in Remanufacturing Systems,” Master’s Project, May 2000.

Damini Dave, “Dynamic Reslotting for Distribution Center Picking Operations,” Master’s Project, August 2000.

Sergio Reyes-Aguirre, “A Procedure for Integrating Material Handling Activities into an Operations Schedule,” Master’s Project, August 2000.

Sira Thienpaitoon, Masters of Engineering (non-thesis), August 2000.

Rajesh Jayaraman, “Heuristics for Consolidation of Goods and Routing,” Master’s Project, May 2001.

Amit Srivastava, “A Distribution Strategy for Vendors Having a Common Set of Retailers,” Master’s Project, May 2001.

Balaji Gowdamachandran, Masters of Engineering (non-thesis), December 2001.

Jill Grotefendt, “Classification of Order Picking Systems,” Master’s Project, December 2001.

Prasanth Potireddy, “Capacitated Coordinated Replenishment,” Master’s Project, August 2002.

Megan Vogt, Masters of Engineering (non-thesis), December 2002.

Harikrishna Sandra, “Development of a Supplier Relationship Management System,” Master’s Project, May 2003.

Pankaj Mittal, Masters of Engineering (non-thesis), December 2003.

Dilip Musani, Masters of Engineering (non-thesis), December 2003.

Vivek Peshkar, Masters of Engineering (non-thesis), December 2003.

Shivcharan Kamaraju, Masters of Engineering (non-thesis), August 2004.

Srihari Vempati, “Performance Analysis of Security Systems,” Master’s Project, December 2004.

Sachin Phadnis, Master of Engineering (non-thesis), May 2005.

Nirvish Urs, Master of Engineering (non-thesis), May 2005.

Anshul Goyal, Master of Engineering (non-thesis), December 2005.

Served on 30+ Master’s Committees.

### ***Undergraduate Research***

Cheryl Zwernemann, 1995

Roberto E. Suarez, 1996

Shane R. Hemby, 1998

Leslie E. Jones, 1999

Nicole E. McGarry, 1999

Paul V. Vo, 1999

Jackie Price, 2000

Natalie A. Privett, 2001

Mustafa Tongarlak, 2003–4

Astrid Garcia Ramos (from Universidad Industrial de Santander, Bucaramanga, Colombia), Jan.-Jul. 2012

### ***Student Advisees’ Awards***

Jill Grotefendt and Richard Marek – Honorable Mention, CICMHE Material Handling Design Competition (2001)

Junjae Chae – Material Handling Education Foundation Scholarship (2002)

Sampatraj Mandroli and Feng Sun – First Place, CICMHE Material Handling Design Competition (2003)  
A. Reha Botsali – Mitsubishi–Caterpillar Forklift Dick Bailey Excellence Scholarship (2003–4; 2004–5)  
Mustafa Tongarlak – Texas A&M Undergraduate Research Fellow (2004)  
A. Reha Botsali – TAMU Graduate Teaching Academy Fellow (2004)  
Anshu Jalora and A. Reha Botsali – Honorable Mention, CICMHE Material Handling Design Competition (2004)  
A. Reha Botsali – Invited Participant INFORMS Future Practitioner Colloquium (2006)  
Soondo Hong – Material Handling Equipment Distributors Association Honor Scholarship (2006–7)  
Soondo Hong – St. Onge Company Honor Scholarship (2007–8)  
Soondo Hong – MHIA Order Fulfillment Council Scholarship (2008–9)  
Jason Clepper – Texas A&M Association of Former Students Distinguished Graduate Student Award for Excellence in Teaching (2010)

## **Professional Activities**

### ***National Positions and Activities***

#### *Professional Organizations*

Elected to College-Industry Council on Material Handling Education (1996 – 2005).

Chair of IPA Committee (1997 – 1998)

Team leader for Web development subgroup (1998 – 1999)

Vice-president (2000 – 2001)

President (2002 – 2003)

Past-president (2004 – 2005)

IIE Facilities Planning and Design Division Newsletter Editor (April 1992 – May 1994)

Brazos Valley IIE Chapter (1992 – 2002)

Secretary (1996 – 1997)

Vice-President (1997 – 1998)

President (1998 – 2002)

Scholarship Fund Trustee, Institute of Industrial Engineers (April 2002 – April 2006; Jan – June 2008)

Council of Industrial Engineering Academic Department Heads (2004 – 2011)

Nominee for Vice-President for Academics, Institute of Industrial Engineers (Fall 2005; Fall 2008)

#### *Conference Activities*

Contributed Session Chair, 2<sup>nd</sup> Industrial Engineering Research Conference, Los Angeles CA, May 1993.

Invited Session Organizer, 3<sup>rd</sup> Industrial Engineering Research Conference, Atlanta, GA, May 1994.

Session Co-organizer, 2<sup>nd</sup> Border Conference on Manufacturing and the Environment, El Paso, TX, May 1994.

Contributed Session Chair, ORSA/TIMS Conference, Detroit, MI, Oct. 1994.

Invited Session Organizer and Chair, Operations Research and Engineering Design Conference, St. Louis, MO, Oct. 1995.

Invited Session Co-organizer, Industrial Engineering Research Conference, Minneapolis, MN, May 1996.

Contributed Session Chair, Industrial Engineering Research Conference, Minneapolis, MN, May 1996.

Session Chair, Symposium on Virtual Reality in Manufacturing, Chicago, IL, Oct. 1996.

Invited Track Chair, Integrated Logistics '96 Conference, Atlanta, GA, Oct. 1996.

Invited Session Organizer, INFORMS Conference, Atlanta, GA, Nov. 1996.



Invited Session Organizer, INFORMS Conference, Dallas, TX, Oct. 1997.  
Invited Session Co-organizer, Industrial Engineering Research Conference, Banff, CA, May 1998.  
Organizing Committee Member, Horizons in Engineering Symposium, College Station, TX, Sept. 1998.  
Panel participant, Facility Design/Material Handling Education, Industrial Engineering Research Conference, Phoenix, AZ, May 1999.  
Poster Session Organizer and Chair, Winter Simulation Conference, Phoenix, AZ, Dec. 1999.  
Organizing Committee Member, Material Handling Research Colloquium, York, PA, June 2000.  
Sponsored Sessions Chair, Organizing Committee, INFORMS 2000, San Antonio, TX, Nov. 2000.  
Poster Session Organizer and Chair, Winter Simulation Conference, Orlando, FL, Dec. 2000.  
Proceedings Editor, Winter Simulation Conference, Washington, DC, Dec. 2001.  
Organizing Committee Member, International Material Handling Research Colloquium, Portland, ME, June 2002.  
Invited Session Co-organizer and Co-chair, INFORMS 2002, San Jose, CA, Nov. 2002.  
Organizing Committee Member, International Material Handling Research Colloquium, Graz, Austria, June 2004.  
Program Chair, Organizing Committee, Winter Simulation Conference, Washington, DC, Dec. 2004.  
Organizing Committee Member, International Material Handling Research Colloquium, Salt Lake City, Utah, June 2006.  
Co-organizer, Doctoral Colloquium, Industrial Engineering Research Conference, Nashville, TN, May 2007.  
Invited Scribe, Material Handling Logistics Summit, Whitefish, Montana, June 2007.  
Co-organizer, Doctoral Colloquium, Industrial Engineering Research Conference, Vancouver, BC, May 2008.  
Organizing Committee Member, International Material Handling Research Colloquium, Dortmund, Germany, June 2008.  
Panel participant, Systems Engineering Education Requirements, Workshop on U.S. Undergraduate Programs in Systems Engineering, Colorado Springs, Colorado, April 2010.

### *Reviewing Activities*

#### Journals

Associate Editor, *Journal of Manufacturing Systems* (Jun. 2000 – Dec. 2007)  
Editorial Board Member, *International Journal of Industrial Engineering* (Nov. 1994 – Oct. 2004)  
Editorial Board Member, *IIE Transactions Design and Manufacturing* (Feb. 2001 – Feb. 2003)  
Academic Guest Editor, *Assembly Automation*, Vol. 20, No. 3, 2000  
Editorial Board Member, *Assembly Automation* (2000 – 2008)  
Reviewer for *ASME Journal of Manufacturing Science and Engineering*, *Computers and Industrial Engineering*, *European Journal of Operational Research*, *IEEE Transactions on Evolutionary Computing*, *IEEE Transactions on Robotics and Automation*, *IEEE Transactions on Systems, Man, and Cybernetics*, *IIE Transactions*, *International Journal of Industrial Engineering*, *International Journal of Flexible Manufacturing Systems*, *International Journal of Manufacturing Engineering*, *International Journal of Production Economics*, *International Journal of Production Planning and Control*, *International Journal of Production Research*, *International Journal of Systems Science*, *Journal of Intelligent Manufacturing*, *Journal of Manufacturing Systems*, *Naval Research Logistics*, *Production and Operations Management*.

### Conferences

Reviewer for *Second and Third Industrial Engineering Research Conference Proceedings*.

Reviewer for the *Proceedings of the 1994 ASME Winter Annual Meeting*.

Reviewer for *2003 Winter Simulation Conference Proceedings*.

### Proposals

Reviewer for Idaho Research Center Grant Program.

Reviewer for Montana Advanced Research Program.

Reviewer for *National Science Foundation* Programs:

Academic Research Infrastructure

Combined Research and Curriculum Development

Industry & University Cooperative Research

Integration Engineering

International Cooperative Research

Production Systems

Manufacturing Enterprise Systems

Service Enterprise Systems

Reviewer for University of Rhode Island Transportation Center Research Program.

Book proposal reviewer for

Industrial Engineering and Management Press

McGraw-Hill Publishers

Morgan Kaufmann Publishers

Prentice Hall

Wiley

### Program and Individual

External Tenure and/or Promotion Reviewer – 25 cases for 22 Universities.

External PhD Thesis Examiner for University of Waterloo (2002).

Academic Liason Committee, Dept. of Industrial Engineering, University of Arkansas (Spring 2008).

External Evaluator, CELDi Strategic Planning Retreat, Jackson, WY (July 2008).

Academic Program Reviewer, Dept. of Industrial and Management Systems Engineering, University of South Florida (Spring 2011).

### ***Texas A&M University***

Manufacturing Systems Seminar Series Coordinator (1992 – 1993)

Engineering Scholars Program Coordinator for Industrial Engineering (1993 – 2004)

Industrial Engineering Faculty Search Committee member (1993 – 1994; 1996 – 1997; 1997 – 1998; 2011 – 2012)

Industrial Engineering Graduate Studies Committee member (1994 – 1997)

Director of Texas A&M Computer Aided Manufacturing Laboratory (1996 – 2004)

College of Engineering Freshman Curriculum Review Committee member (1996 – 1997)

Industrial Engineering Strategic Planning Committee member (1998)

Industrial Engineering Scholarship Committee Chair (1998 – 2002)

Industrial Engineering Computer Committee Chair (1999 – 2002)

Industrial Engineering Undergraduate Studies Committee member (1999 – 2002)

Alpha Pi Mu Chapter Faculty Advisor (2000 – 2002)

Industrial Engineering Faculty Search Committee Chair (2000 – 2002)  
Industrial Engineering Department Head Search Committee member (2000 – 2002)  
Industrial Engineering Wisenbaker Chair Search Committee member (2003 – 2004)  
College of Engineering Interdisciplinary Design Initiative Committee member (2001 – 2003)  
Faculty Senate, College of Engineering Representative (2002 – 2005)  
*Parsons* Seminar Series Coordinator (2009 – 2010)  
College of Engineering Project Management Advisory Committee (2005 – 2010)  
Industrial and Systems Engineering Tenure and Promotion Committee member (2011 – present)

### ***Consulting***

Air Products, Inc., Atlanta, GA.  
Coca-Cola, Inc., Atlanta, GA.  
Southwestern Bell Technology Resources, Austin, TX.  
Ashbrook, Inc., Houston, TX.  
Ethicon, Inc. – A Johnson & Johnson Company, San Angelo, TX.  
Texas Department of Transportation, Austin, TX.  
The Museum of Fine Arts, Houston, TX.

### **Professional Development Workshops**

New Educator's Workshop, ASEE Annual Conference, Toledo, OH, June 1992.  
Automatic Identification Teachers Institute, Ohio University, Athens, OH, July 1992.  
ProMat '93, Material Handling Trade Show, Chicago, IL, Feb. 1993.  
Material Handling Teacher's Institute, Rensselaer Polytechnic Institute, Troy, NY, Aug. 1993.  
Academic Writing and Publishing: A Workshop on Increasing Scholarly Productivity, Texas A&M University, College Station, TX, Feb. 1995.  
NSF Workshop on Manufacturing Logistics, Lehigh University, Bethlehem, PA, May 1997.  
Horizons in Engineering Symposium, Texas A&M University, College Station, TX, Sept. 1998.  
NA 2000, Material Handling Trade Show, Detroit, MI, April 2000.  
National Academy of Engineering Mini-Symposium, Texas A&M University, College Station, TX, March 2001.  
Material Handling Teacher's Institute, University of Louisville, Louisville, KY, June 2003.  
Material Handling Logistics Summit, Whitefish, Montana, June 2007.  
The Academy of Medicine, Engineering, and Science of Texas Workshop on the Business of Fueling the Future, College Station, TX, March 2008.  
National Academy of Engineering Regional Symposium on Research Challenges, Texas A&M University, College Station, TX, April 2009.  
The Academy of Medicine, Engineering, and Science of Texas Energy Summit, Texas A&M University, College Station, TX, April 2011.

**Brett A. Peters**  
**Overview of Administrative Accomplishments**

Responsible for all academic, research, and development programs as well as overall administration of a top-10 ranked department

- Annual budget of over \$4M, not included faculty-directed research expenditures
- Hired 13 faculty members, including four from under-represented groups
- Increased departmental space by 35% with move to new Emerging Technologies and Economic Development building

Improvements in undergraduate program

- Increased enrollment by 240%
- Improved overall diversity, particularly with women students
- Added technical writing center
- Established cloud-computing infrastructure for all students

Improvements in graduate program

- Increased enrollment by 100%
- Improved diversity, particularly with under-represented, domestic PhD students
- Enhanced overall quality of incoming PhD students
- Established PhD Career Development Initiative

Expanded external development and fund-raising activities

- Raised \$3M in endowed funds including a Chair, Faculty Fellowships, Scholarships, and Excellence Funds
- Built a strong foundation for continuing development activities

Expanded industrial council

- Added representation from key companies and industries
- Improved diversity of the membership
- Refocused the Council's activities toward development and external fund raising

Expanded distance-learning Master's program to working professionals

- Increased number of students by 100%
- Expanded course offerings with additional ISE courses, and new coursework from Civil Engineering, Chemical Engineering, and Business Finance
- Increased revenue to the Department by over \$250,000 per year

Active involvement in significant interdisciplinary initiatives including

DoD's University Affiliated Research Center for Systems Engineering Research

One of the initial universities that established this Center to perform leading edge research to create agile and flexible systems engineering methodologies and train the next-generation of systems engineers.

Texas A&M Energy Engineering Institute

One of the founding Departments in this interdisciplinary initiative across several colleges spanning engineering, social sciences, and public policy that integrates and promotes research and education in alternative energy, conservation and efficiency, and environmental sustainability.

National Center for Therapeutics Manufacturing

Key partner in creating academic and research programs for improving production and manufacturing of therapeutics and pharmaceuticals focused on pilot-production and rapid scaling to mass-production of new compounds.

Partnerships with the Texas A&M System Health Science Center

Partnered with academic departments, research centers, and outreach agencies to create undergraduate and graduate certificate programs in health systems and to develop research collaborations addressing effective health care delivery.