

**Purushothaman Damodaran, Ph.D.**  
Assistant Professor  
Department of Industrial & Systems Engineering  
Florida International University  
10555 W. Flagler Street, EC3172, Miami, FL 33174  
Phone: (305) 348-6912; E-mail: damodarp@fiu.edu

## Education

- Ph.D., Industrial Engineering, Texas A&M University (2002)  
Advisor: Dr. Wilbert E. Wilhelm  
Dissertation: *Branch-and-Price Methods for Prescribing Profitable Upgrades of High-Technology Products with Stochastic Demands.*
- M.S., Industrial Engineering, Northern Illinois University (1997)  
Advisor: Dr. Murali Krishnamurthi  
Thesis: *A Methodology for Dynamic Planning for Road Service During a Snow Fall.*
- B.E., Mechanical Engineering, University of Madras (1994)

## Professional Experience

- Assistant Professor (August 2006 - present)  
Florida International University, Miami, FL 33174.
- Research Assistant Professor (September 2002 - August 2006)  
State University of New York, Binghamton, NY 13902-6000.
- Lecturer (September 2000 - May 2002)  
Texas A&M University, College Station, TX 77843-3131.
- Research Assistant (September 1997 - August 2002)  
Texas A&M University, College Station, TX 77843-3131.
- Research/Teaching Assistant (August 1995 - July 1997)  
Northern Illinois University, DeKalb, IL 60115.

## Research Focus

- **Large-scale optimization** (mixed-integer deterministic and stochastic formulations, branch-and-price; Applications: new product development, VLSI physical design, PCB assembly line optimization)
- **Scheduling** (mathematical formulations, branch-and-bound, metaheuristics; Applications: batch processing machines at test facilities)
- **Electronics Manufacturing** (Applications: process optimization, reverse logistics, green manufacturing)
- **Simulation** (discrete, continuous, metamodels; Applications: snow removal problem, manufacturing)
- **Logistics** (mathematical formulations; Applications: warehouse slotting, sales force effectiveness, retailer assortment)

## Teaching

S- Spring; Su-Summer; F-Fall

- Florida International University (August 2006 - present)
  - Graduate Level
  - ESI 6316. Applications of OR in Manufacturing [F 06]
  - EIN 6336. Advanced Production Planning & Control [S 07]
  
  - Undergraduate Level
  
- State University of New York at Binghamton (September 2002 - August 2006)
  - Undergraduate Level
  - ISE 420. Optimization & Operations Research [F 03]
  - ISE 421. Modeling and Simulation [F 04]
  
- Texas A&M University (September 2000 - May 2002)
  - Undergraduate Level
  - INEN 302. Economic Analysis of Engineering Projects [F 00, S, Su, F 01, S 02]

## Publications

### ♦ Referred Journal Publications (arranged in reverse chronological order)

Note: My graduate student is the first author on the articles marked with \*\*

1. **Damodaran, P.**, P.Y. Chang. Heuristics to minimize makespan of parallel batch processing machines. *International Journal of Advanced Manufacturing Technology (accepted)*.
2. \*\*Pradhan, S., **P. Damodaran**, K. Srihari. Prediction of performance measures for Markovian type of manufacturing systems with product failures. *European Journal of Operational Research (accepted)*.
3. **Damodaran, P.**, M. Krishnamurthi, K. Srihari. Lower bounds for hierarchical Chinese postman problem. *International Journal of Industrial Engineering (accepted)*.
4. Wilhelm, W.E., N.D. Choudhry, **P. Damodaran** (2007). A model to optimize placement operations on dual-head placement machines. *Discrete Optimization*, 4, 232-256.
5. **Damodaran, P.**, K. Srihari, S. Lam (2007). Scheduling a capacitated batch processing machine to minimize makespan. *Robotics and Computer-Integrated Manufacturing*, 23(2) 208-216.
6. \*\*Wable, G.S., Q. Chu, **P. Damodaran**, K. Srihari (2006). Wave soldering using Sn/3.0Ag/0.5Cu solder and water soluble VOC-free flux. *IEEE Transactions on Electronics Packaging Manufacturing*, 29(3) 202-210.
7. \*\*Manjunath, D, S. Iyer, S. Eckel, **P. Damodaran** , K. Srihari (2006). Minimizing flux spatter in a lead-free assembly. *Soldering & Surface Mount Technology*, 18(3) 19-23.

8. **Damodaran, P.**, P. Manjeshwar, K. Srihari (2006). Minimizing makespan on a batch processing machine with non-identical job sizes using genetic algorithms. *International Journal of Production Economics*, 103(2) 882-891.
9. \*\*Iyer, S, N. Nagarur, **P. Damodaran** (2006). Model based approaches for selecting reliable underfill-flux combinations for flip chip assemblies. *Journal of Surface Mount Technology*, 19(2) 19-25.
10. **Damodaran, P.**, W.E. Wilhelm (2005). Branch-and-Price approach for prescribing profitable feature upgrades. *International Journal of Production Research*, 43(21) 4539-4558.
11. \*\*Wable, G.S., Q. Chu, **P. Damodaran**, K. Srihari (2005). A systematic procedure for the selection of a lead-free solder paste at an electronics manufacturing environment. *Soldering & Surface Mount Technology*, 17(2) 32-39.
12. **Damodaran, P.**, M. Krishnamurthi (2005). A continuous simulation model for snow removal. *International Journal of Industrial Engineering*, 12(2) 188-197.
13. **Damodaran, P.**, K. Srihari (2004). Mixed integer formulation to minimize makespan in a flow shop with batch processing machines. *Mathematical and Computer Modelling*, 40(13) 1465-1472.
14. Chang, P., **P. Damodaran**, S. Melouk (2004). Minimizing makespan on parallel batch processing machines. *International Journal of Production Research*, 42(19) 4211-4220.
15. **Damodaran, P.**, W.E. Wilhelm (2004). Branch-and-Price methods for prescribing profitable upgrades of high-technology products with stochastic demands. *Decision Sciences*, 35(1) 53-80.
16. Melouk, S., **P. Damodaran**, P. Chang (2004). Minimizing makespan for a single machine batch processing with non-identical job sizes using simulated annealing. *International Journal of Production Economics*, 87(2) 141-147.
17. Wilhelm, W.E., **P. Damodaran**, J. Li (2003). Prescribing the content and timing of product upgrades, *IIE Transactions*. 35(7) 647-663.
18. **Damodaran, P.**, S. Melouk (2002). Comparison of push and pull systems with transporters: a metamodelling approach. *International Journal of Production Research*, 40(12) 2923-2936.
19. Panneerselvam R., M.T. Thiagarajan, **D. Purushothaman** (1996). Heuristic for partial covering problem. *Industrial Engineering Journal*, Vol XXV No. 10 11-16.

#### ◆ Journal Papers in Review

Note: My graduate student is the first author on the proceedings marked with \*\*

1. \*\*Iyer, S., S. Sajjala, **P. Damodaran**, K. Srihari. Implementing 0201's on high density lead-free memory modules. *IEEE Transactions on Electronics Packaging Manufacturing* (submitted - March 2007).
2. \*\*Manjunath, D., S. Iyer, **P. Damodaran**, K. Srihari. Developing a repeatable and reliable rework process for lead-free fine pitch BGAs. *IEEE Transactions on Electronics Packaging Manufacturing* (submitted - March 2007; under revision).

3. \*\*Pradhan, S., **P. Damodaran**. Performance characterization of complex manufacturing systems With general distributions and job failures. *European Journal of Operational Research* (submitted - February 2007).
4. \*\*Manjeshwar, P., **Damodaran, P.**, K. Srihari. Makespan minimization in a flow shop with two batch-processing machines using simulated annealing. *International Journal of Production Economics* (submitted - June 2006; revised - April 2007).
5. \*\*Koli, S., **P. Damodaran** , B. Kimler, K. Srihari. Product slotting in a warehouse with rectangular layout. *Transportation Research Part E: Transportation and Logistics Review* (submitted - April 2005; under revision).

◆ **Referred Conference Proceedings (arranged in reverse chronological order)**

Note: My graduate student is the first author on the proceedings marked with \*\*

1. \*\*Thiagarajan, A., **P. Damodaran**, K. Srihari. Optimizing the cycle time of a component placement machine. *To appear in the Proceedings of the ASME InterPACK 2007 Conference*, Vancouver, July 8-12, 2007.
2. Vishwanathan, K., N. Kulkarni, A. Pachamuthu, D. Santos, **P. Damodaran**. A comparative study of dispatching rules in hybrid flow shops with discrete and batch processors. *Proceedings of the 16th Annual Industrial Engineering Research Conference*, Nashville, TN, May 19-23, 2007.
3. Green, C., **P. Damodaran**. Artificial neural networks for reflow profiles in electronics assembly. *Proceedings of the 16th Annual Industrial Engineering Research Conference*, Nashville, TN, May 19-23, 2007.
4. Melouk, S.H., **P. Damodaran**. Analysis of the passenger security screening process using simulation optimization. *Proceedings of the 16th Annual Industrial Engineering Research Conference*, Nashville, TN, May 19 - 23, 2007.
5. \*\*Subbarayan, G., R. Kinyanjui, P.F. Tsai. K. Srihari, **P. Damodaran**. Effect of lead-free PCB surface finishes on the formation of microvoids and kirkendall voids. *Proceedings of the 16th Annual Industrial Engineering Research Conference*, Nashville, TN, May 19-23, 2007.
6. \*\*Ramakrishnan, S., **P. Damodaran**, M. Testani, K. Srihari. A systems approach to evaluate discrete event simulation softwares. *Proceedings of the 16th Annual Industrial Engineering Research Conference*, Nashville, TN, May 19-23, 2007.
7. \*\*Kulkarni, N., **P. Damodaran**, K. Srihari. Wirebonding and plasma cleaner: Issues in Manufacturing. *Proceedings of the 16th Annual Industrial Engineering Research Conference*, Nashville, TN, May 19-23, 2007.
8. \*\*Mestry, S., **P. Damodaran**, M. Krishnamurthi. Scheduling a capacitated batch processing machine using Genetic Algorithms. *Proceedings of the 16th Annual Industrial Engineering Research Conference*, Nashville, TN, May 19-23, 2007.
9. \*\*Mestry, S., **P. Damodaran**, C. Chen, C. Wang. A capacity planning model for make-to-order enterprise. *Proceedings of the 13th Annual International Conference of Industry, Engineering and Management Systems*, Cocoa Beach, FL, March 12-14, 2007.

10. \*\*Subbarayan, G., B. Warnock, **P. Damodaran**, K. Srihari, J. Arellano. An experimental study of lead-free wave soldering using SAC 305 and no-clean flux. *Proceedings of 2006 ASME International Mechanical Engineering Congress & Exposition*, Chicago, IL, November 5-10, 2006.
11. \*\*Bruno, F., **P. Damodaran**, K. Srihari, G. Subbarayan. An experimental study on voids in mixed alloy assemblies. *Proceedings of 2006 ASME International Mechanical Engineering Congress & Exposition*, Chicago, IL, November 5-10, 2006.
12. **Damodaran, P.**, P. Pallipat, K. Srihari. Heuristics to improve the performance of a dual head placement machine. *Proceedings of the 15th Annual Industrial Engineering Research Conference*, Orlando, FL, May 20-24, 2006.
13. **Damodaran, P.**, P. Manjeshwar, K. Srihari. Minimizing makespan on two batch processing machines in flow shop. *Proceedings of the 15th Annual Industrial Engineering Research Conference*, Orlando, FL, May 20-24, 2006.
14. \*\*Manjunath, D., S. Iyer, S. Eckel, **P. Damodaran**, K. Srihari. A repeatable and reliable rework process for lead-free fine pitch BGAs. *Proceedings of 2005 ASME International Mechanical Engineering Congress & Exposition*, Orlando, FL, November 5-11, 2005.
15. \*\*Pradhan, S., **P. Damodaran**, K. Srihari. Performance analysis of manufacturing system with job failures using Jackson networks. *Proceedings of the 14th Annual Industrial Engineering Research Conference*, Atlanta, GA, May 14-18, 2005.
16. **Damodaran, P.**, S. Koli, B. Kimler, K. Srihari. Optimal product Slotting. *Proceedings of the 14th Annual Industrial Engineering Research Conference*, Atlanta, GA, May 14-18, 2005.
17. \*\*Ramachandran, P., A. Agnihothri, S. Ono, **P. Damodaran**, K. Srihari, P.H. Madden. Optimal placement through Branch-and-Price. *Proceedings of the 14th Asia and South Pacific Design Automation Conference*, Shanghai, China, January 18-21, pp 337-341, 2005.
18. \*\*Pradhan, S., J. Arbulich, **P. Damodaran**, K. Srihari. Testability of erbium doped fiber amplifiers - An approach towards yield improvement. *Proceedings of 2004 ASME International Mechanical Engineering Congress & Exposition*, Anaheim, CA, November 13-19, 2004.
19. Krishnamurthi, M., **P. Damodaran**. A modified postman tour heuristic for efficient snow removal planning. *Proceedings of the 7th Annual Industrial Engineering Research Conference*, Banff, Alberta, Canada, 1998.

◆ **Conference Proceedings (arranged in reverse chronological order)**

Note: My graduate student is the first author on the proceedings marked with \*\*

1. \*\*Bruno, F., K. Srihari, **P. Damodaran**, M. Abteu. A systematic approach to qualify lead free assembly for an electronics manufacturer. *Proceedings of International Flexible Automation and Intelligent Manufacturing Conference*, Limerick, Ireland, June 26-28, 2006.
2. \*\*Sajjala, S., S. Iyer, **Damodaran**, K. Srihari. Stencil evaluation for lead-free 0201s. *Proceedings of IPC/JEDEC 9th Annual International Conference on Lead Free Electronic Assemblies and Components*, Santa Clara, CA, April 2006.

3. **Damodaran, P.**, G. George, K. Srihari. Improving Sales Force Efficiency at a Warehouse. *Proceedings of 10th Annual International Conference on Industrial Engineering Theory, Applications & Practice*, Clearwater Beach, FL, December 4-7, 2005.
4. **Damodaran, P.**, A. Thiagarajan, K. Srihari. Improving the Performance of a Pick-and-Place Machine *Proceedings of 10th Annual International Conference on Industrial Engineering Theory, Applications & Practice*, Clearwater Beach, FL, December 4-7, 2005.
5. \*\*Manjunath, D., S. Iyer, S. Eckel, D. Le, **P. Damodaran**, K. Srihari. Minimizing flux residue on component body. *Proceedings of SMTA International* , Chicago, IL, September 25-29, 2005.
6. \*\*Iyer, S., N. Nagarur, **P. Damodaran**. Model based approach for selecting reliable underfill-flux Combinations for flip chip packages. *Proceedings of SMTA International* , Chicago, IL, September 25-29, 2005.
7. \*\*Manjeshwar, P., M. Castro, **P. Damodaran**, J. Craig, K. Srihari. Stencil printing and reflow parameter 'optimization' during the assembly of 0201 components. *Proceedings of SMTA International* , Chicago, IL, September 25-29, 2005.
8. \*\*Subbarayan, G., M. Abtey, **P. Damodaran**, K. Srihari. Modeling printed circuit assembly cost in RoHS compliant manufacturing. *Proceedings of IPC/JEDEC 9th International Conference on Lead Free Electronic Assemblies and Components*, Singapore, September 12-16, 2005.
9. \*\*Manjunath, D., S. Iyer, S. Eckel, **P. Damodaran**, K. Srihari. Flux spatter evaluation using lead-free solder pastes. *Proceedings of IPC/JDEC 8th Annual International Conference on Lead-free electronic assemblies and components*, San Jose, CA, April 19-20, 2005.
10. \*\*Wable, G. Q. Chu, **P. Damodaran**, K. Srihari. and others. A Manufacturability Study on Tin-Lead to Lead Free Product Conversion. *Proceedings of IPC/JDEC 5th Annual International Conference on Lead-free electronic assemblies and components*, San Jose, CA, March 17-19, 2004.
11. \*\*Wable, G., Q. Chu, **P. Damodaran**, P. Verbeist, K. Srihari. A comparison of lead-free solder pastes with no-clean and water-soluble flux chemistries. *Proceedings of IPC/JDEC 3rd Annual International Conference on Lead-free electronic assemblies and components*, San Jose, CA, 2003.
12. \*\*Wable, G., Q. Chu, **P. Damodaran**, S.S. Phadnis, K. Srihari. A systematic procedure for selection of a lead-free solder paste at an electronics manufacturing environment. *Proceedings of 13th Flexible Automation and Intelligent Manufacturing Conference*, Tampa, FL, June 9-11, 2003.

### **Sponsored Research Projects (September 2002 - present: \$1,361,519)**

1. Factory Information System for Automotive Electronics Assembly (Aug 2002 - Aug 2003), \$45,284, Motorola, Elma, NY.
2. Research in Lead Free Wave Soldering (Jun 2003 - Dec 2003), \$20,083, Jabil Circuits, St. Petersburg, FL.

3. Research in Lead Free Assembly (May 2003 - May 2004), \$48,046, SMART Modular Technologies, Fremont, CA.
4. Research in Optoelectronics Assembly (Aug 2003 - Aug 2004), \$51,875, Sanmina-SCI Corporation, San Jose, CA.
5. Research in Electronics Manufacturing Systems (Aug 2003 - Aug 2004), \$51,875, Sanmina-SCI Corporation, San Jose, CA.
6. Research in Lead Free Manufacturing (Dec 2003- Aug 2004), \$27,693, Jabil Circuits, St. Petersburg, FL.
7. Manufacturing Information Systems in Electronics Manufacturing (Jan 2004 - Dec 2004), \$52,868, Sanmina-SCI Corporation, San Jose, CA.
8. Research in Printed Circuit Board Assembly (Jan 2004 - Dec 2004), \$89,280, Sanmina-SCI Corporation, Huntsville, Al.
9. Improving the Slotting Process (Jan 2004 - Jul 2004), \$21,483, Maines Paper and Food Services, Conklin, NY.
10. Lead-free Electronics Manufacturing (May 2004 - May 2005), \$49,300, SMART Modular Technologies, Fremont, CA.
11. Facilities Planning and Process Engineering in Automotive Electronics Assembly (May 2004 – May 2005), \$64,136, Motorola, Elma, NY.
13. Manufacturing Systems Research in Automotive Electronics Assembly (Aug 2004 - Aug 2005), \$78,189, Motorola, Elma, NY.
14. Research in Manufacturing Processes and Systems (Aug 2004 - Aug 2005), \$52,944, Sanmina-SCI Corporation, San Jose, CA.
15. Research in Manufacturing Processes (Aug 2004 - Aug 2005), \$52,944, Sanmina-SCI Corporation, San Jose, CA.
16. Lead Free Electronics Manufacturing (Aug 2004- Dec 2004), \$16,015, Jabil Circuits, St. Petersburg, FL.
17. Improving the Effectives of the Sales Force (Sep 2004 - Jan 2005), \$14,367, Maines Paper and Food Services, Conklin, NY.
18. Manufacturing Information Systems in Electronics Manufacturing (Jan 2005 - Aug 2005), \$32,803, Sanmina-SCI Corporation, San Jose, CA.
19. Research in Printed Circuit Board Assembly (Jan 2005 - Dec 2005), \$88,974, Sanmina-SCI Corporation, Huntsville, Al.
20. Process Research in Surface Mount Technology (Feb 2005 - Jun 2005), \$19,736, SMART Modular Technologies, Fremont, CA.
21. Research in Manufacturing Systems (Feb 2005 - Jan 2006), \$38,889, Motorola, Elma, NY.
22. Process Research in Surface Mount Technology (Jun 2005 - Jun 2006), \$48,938, SMART Modular Technologies, Fremont, CA.
23. Manufacturing Systems Research in Automotive Electronics Assembly (May 2005 - May 2006), \$128,000, Motorola, Elma, NY.

24. Research in Manufacturing Processes (May 2005 - Aug 2006), \$63,005, Sanmina-SCI Corporation, San Jose, CA.
25. Testing Sensors in Automotive Electronics Assembly (Aug 2005 - Aug 2006), \$41,985, Motorola, Elma, NY.
26. Improving Manufacturing Systems Performance through Simulation & Modeling (Sept 2005 – Sept 2006), \$39,973, IBM Corporation, NY.
27. Modeling and Simulation of Lean Manufacturing Systems (Jan 2006 - Jan 2007), \$44,712, IBM Corporation, NY.
28. Research in Printed Circuit Board Assembly (Feb 2006 - Aug 2007), \$78,122, SMART Modular Technologies, Fremont, CA.

## **Technical Reports Submitted to Industry**

1. Deshpande, A., K. Srihari, S. Lam, P. Damodaran. Introduction to PPRT manufacturing system, Motorola, Elma, NY (November 2002).
2. Deshpande, A., P. Damodaran, S. Jumani. Quality tracking system, Motorola, Inc., Elma, NY (April 2003).
3. Iyer, S., P. Damodaran, K. Srihari. Evaluation of effectiveness of SC10E for under-screen cleaning while printing lead-free Kester R905, Smart Modular Technologies, Fremont, CA (September 2003).
4. Pradhan, S., P. Damodaran, K. Srihari. Failure analysis of 980 NM couplers used in EDFAs, Sanmina-SCI Corporation, San Jose, CA (November 2003).
5. Pradhan, S., P. Damodaran, K. Srihari. Development of a MAC address retrieval system, Sanmina-SCI Corporation, San Jose, CA (December 2003).
6. Iyer, S., P. Damodaran, K. Srihari. Printing evaluation of four lead-free solder pastes, Smart Modular Technologies, Fremont, CA (January 2004).
7. Manjunath, D., P. Damodaran, K. Srihari. Comparison of Infineon tin whisker test data against Solectron and Cisco specifications, Smart Modular Technologies, Fremont, CA (February 2004).
8. Pallipat, P., P. Damodaran, K. Srihari. Gage repeatability and reproducibility study on Sentry 2000, Sanmina-SCI Corporation, San Jose, CA (March 2004).
9. Manjeshwar, P., M. Castro, P. Damodaran, K. Srihari. Stencil printing parameter 'optimization' for assembly of 0201 components by a designed experiment approach, Sanmina-SCI Corporation, San Jose, CA (June 2004).
10. Sumit, K., P. Damodaran, K. Srihari. Optimal product slotting, Maines Paper and Food Services Inc., Conklin, NY (July 2004).
11. Pradhan, S., P. Damodaran, K. Srihari. Failures on 980 nm laser pumps used in Erbium doped fiber amplifiers, Sanmina-SCI Corporation, San Jose, CA (November 2004).
12. George, G.J., P. Damodaran, K. Srihari. Improving the efficiency of the sales force, Maines Paper and Food Services Inc., Conklin, NY (January 2005).
13. Sparks, T., P. Damodaran, K. Srihari. Using process capability and DOE to identify critical factors in an automotive screw drive operation, Motorola, Elma, NY (February 2005).

14. Ramakrishnan, S., M. Scheneider, P. Damodaran, K. Srihari. Key quality metrics in electronics manufacturing, IBM Corporation (Feb 2006).
15. Scheneider, M., S. Ramakrishnan, P. Damodaran, K. Srihari. Attribute based statistical process control in server manufacturing, IBM Corporation (Feb 2006).
16. Ramakrishnan, S., P. Damodaran, K. Srihari. An evaluation of discrete event simulation softwares, IBM Corporation (Feb 2006).

## **Presentations**

### **◆ Conference Presentations**

1. Nananukul, N., P. Damodaran, W.E. Wilhelm. An application of branch & price to upgrade high-tech products optimally, maintaining competitiveness over the life cycle. INFORMS Conference, Cincinnati, OH, May 1999.
2. Damodaran, P., W.E. Wilhelm. A branch-and-price approach to upgrade high-technology products: Computational experience. INFORMS Conference, Salt Lake City, Utah, May 2000.
3. Damodaran, P., W.E. Wilhelm. Upgrading high-technology products to improve profit margins in a stochastic environment. INFORMS Conference, Miami, FL, November 2001.

### **◆ Invited Presentations**

1. Prescribing profitable feature upgrades for high-technology products with stochastic demands. Wichita State University, Wichita, KS, November 2001.
2. Branch-and-Price approach for prescribing profitable feature upgrades in a stochastic environment. State University of New York, Binghamton, NY, May 2002.
3. Branch-and-Price for cell placement. IBM TJ Watson Research Center, Yorktown Heights, NY, March 2004.
4. Simulation in Manufacturing. Sanmina-SCI, San Jose, CA, April 2004.
5. Research in Warehousing and Logistics. State University of New York, Binghamton, NY, November 2004.
6. Discrete Event Simulation - Software Evaluation. IBM Corporation, Rochester, MN, January 2006.
7. Branch-and-Price for Large-Scale Optimization. Ohio University, Athens, OH, February 2006.
8. Branch-and-Price for Large-Scale Optimization. Florida International University, Miami, FL, March 2006.
9. Warehouse and Distribution Logistics. UPC seminar on Logistics, FIU, Miami, FL, November 2006.

## **Student Advising**

### **◆ Ph.D. Dissertation Advisor**

1. Salil Pradhan (Summer 2005) - Capacity planning and allocation for a complex manufacturing system with job failures. Sanmina-SCI, San Jose, CA
2. Praveenkumar Manjeshwar (Summer 2005) - Scheduling batch processing machines in a flow shop. Sanmina-SCI, San Jose, CA
3. Felix Bruno (Spring 2006) An experimental study of voiding in mixed alloy assemblies. Intel Corporation, Phoenix, AZ
4. Siddharth Mestry ( )
5. Mario C. Valez ( )

◆ **M.S. Thesis Advisor**

1. Anirudha Deshpandhe<sup>#</sup> (Summer 2003) - Real time monitoring system for a manufacturing system.
2. Sumit Koli<sup>#</sup> (Summer 2004) - Optimizing slotting process in a warehouse. Maines Paper & Food Services, Conklin, NY
3. Pradeep Ramachandran (Summer 2004) - Branch-and-Price for cell placement problem in VLSI physical design. Deccan International, San Diego, CA
4. Deepak Manjunath (Summer 2005) - A repeatable and reliable rework process for lead-free fine pitch BGAs. Solectron, Milpitas, CA
5. Paul Pallipat (Summer 2005) - Heuristics to improve the operations of a dual head pick-and-place machine. Sanmina-SCI, San Jose, CA
6. Ashok Thiagarajan (Summer 2005) - Improving the performance of a single head multi-nozzle pick-and-place machine. Motorola, Elma, NY
7. Niranjana Kulkarni (Spring 2006) - An investigation on bottleneck location, capacity and buffer size on flow and flexible flow lines. PhD student at SUNY Binghamton
8. Sandeep S. Sajjala (Summer 2006) - Optimizing stencil and pad design for 0201 components in a lead free assembly.
9. Neal S. Hirani (Summer 2006) - Scheduling parallel batch processing machines to minimize makespan using genetic algorithms.
10. Gikku J. George (Summer 2006) - A simulation model to analyze post reflow processes at an electronics manufacturing facility. Sanmina-SCI, San Jose, CA
11. Albin Antony (Summer 2006) - Fault tree analysis for automotive pressure sensor assembly lines. Continental Automotive Systems, Inc., Elma, NY

◆ **Committee Involvement**

1. Girish Wable (M.S. Summer 2003) - Lead-free wave soldering process development with VOC-free water soluble flux chemistry. Jabil Circuits, St. Petersburg, FL
2. Satya Iyer (M.S. Fall 2003) - Analysis of underfill-flux combinations for flip chip packages using regression and neural network models. SMART Modular Technologies, Fremont, CA

---

<sup>#</sup> Outstanding Graduate Student Award

3. Ateen Anant Khatkhate (M.S. Spring 2004) - Mixed block placement in VLSI design.  
Lockheed Martin, Owego, NY
4. Guhan Subbarayan (Ph.D.)
5. Satyanarayan Iyer (Ph.D.)
6. Lixiang Jiang (Ph.D.)

◆ **Research Experiences for Undergraduates (NSF) Through the Integrated Electronics Engineering Center at Binghamton University**

1. Brian Yamagata (Summer 2003) University of Massachusetts, Amherst.

## Services

◆ **I&SE Department**

1. Library committee representative (AY 2006-2007)
2. Ad-hoc ethics committee member
3. Senior design - Mentor for the UPS team
4. Professional induction ceremony volunteer (Fall 2006)
5. Senior design – Poster evaluator (Spring 2007)
6. Professional induction ceremony volunteer (Spring 2007)

◆ **College of Engineering and Computing**

1. Banner Marshall - graduation ceremony (Fall 2006)

◆ **Profession**

1. Ad-hoc Referee (number reviewed):
  - Decision Sciences (1)
  - International Journal of Production Research (4)
  - Mathematical and Computer Modelling (1)
  - Asia-Pacific Journal of Operational Research (1)
  - European Journal of Operational Research (1)
  - Annual Industrial Engineering Research Conference (6)
2. Session Chair, Engineering Management Track at 2005 IJIE Conference, Clearwater Beach, FL
3. Session Chair, Manufacturing Systems & Operations Research Tracks at 2005 IERC, Atlanta, GA

4. Book Chapter Reviewer: Chapter 2 from "Flow Shop Lot Streaming Problems" by Subhash Sarin and Puneet Jaiprakash for Springer.
5. Session Chair, Production & Scheduling Track at 2006 IERC, Orlando, FL

## **Professional Memberships & Activities**

- Member: IIE
- Treasurer (1996-1997) Alpha Pi Mu, Northern Illinois University
- Developed and maintained the webpage for Alpha Pi Mu at Northern Illinois University

## **Honors, Awards, & Recognition**

- Listed in Marquis Who's Who in America 2005 - present
- Honorarium - Personal Interest Committee at IBM TJ Watson Research Center for a talk on B&P for cell placement
- INFORMS 2001 Doctoral Colloquium participant
- Regents Graduate Fellowship (1997-1998), Office of the Vice President for Research and Associate Provost for Graduate Studies, Texas A&M University
- Finalist - Graduate Research Award (IIE), Nominated by Prof. Marcellus, Northern Illinois University
- Outstanding Service Award (1996), Faculty advisor of Alpha Pi Mu, Northern Illinois University
- Student Leader of the Month Award (October 1996), University Programming and Activities, Northern Illinois University
- Inducted into Alpha Pi Mu (1996), National Industrial Engineering Honor Society