

Curriculum Vitae

Frank W. Ciarallo, Ph.D.

Associate Professor
Department of Biomedical, Industrial and Human Factors Engineering
College of Engineering & Computer Science
Wright State University
207 Russ Engineering Center
3640 Colonel Glenn Highway
Dayton, OH 45435

Education

- Doctor of Philosophy, Industrial Administration, Graduate School of Industrial Administration, Carnegie Mellon University, 1993, Dissertation Title: "Planning with Yield Uncertainty", Advisor: Professor Ramakrishna Akella
- Master of Science, Manufacturing and Operations Systems, Graduate School of Industrial Administration, Carnegie Mellon University, 1988
- Bachelor of Science, Electrical Engineering, Engineering & Public Policy, Carnegie Mellon University, 1986 (University Honors and Research Honors)

Academic Employment

- September 2006 – Present, Associate Professor, Dept. of Biomedical, Industrial and Human Factors Engineering, Wright State University, Dayton, OH
- September 2010 – November 2010, Visiting Researcher (on professional development leave), OPAC Group, School of Industrial Engineering and Innovation Sciences, Eindhoven Technical University, Eindhoven, Netherlands
- June 2010 – August 2010, American Society for Engineering Education Faculty Fellow, Dept. of Operational Sciences, Air Force Institute of Technology, WPAFB, OH
- March 2003 – August 2006, Assistant Professor, Dept. of Biomedical, Industrial and Human Factors Engineering, Wright State University, Dayton, OH
- Jan 2001 - May 2001, Visiting Assistant Professor, Haas School of Business, University of California, Berkeley, CA
- Jan. 1994 – Dec. 2001, Assistant Professor, Dept. of Systems & Industrial Engineering, University of Arizona, Tucson, AZ
- Jan. 1992 – Dec. 1993, Instructor, Dept. of Systems & Industrial Engineering, University of Arizona, Tucson, AZ

Industry Employment

- May 1988 - August 1988, Research Internship, IBM T.J. Watson Research Center, Yorktown Heights, NY.
- 1985 – 1992 (summers, contracts), Software developer, Allegheny Ludlum Corporation Research Center, Natrona Heights PA.

Publications

Refereed Journal Publications (accepted and published)

1. D.F. Lochtefeld, F.W. Ciarallo, "Helper-Objective Optimization Strategies for the Job-Shop Scheduling Problem", *Applied Soft Computing*, Volume 11, Issue 6, September 2011, pp 4161-4174
2. S. Niranjana, F.W. Ciarallo, "Supply Performance in Multi-Echelon Inventory Systems with Intermediate Product Demand: A Perspective on Allocation", *Decision Sciences*, Volume 42, No. 3, August 2011, pp 575-617
3. B. Heath, R. Hill, F.W. Ciarallo, "Validation in the Agent-Based Modeling Paradigm: Problems and a Solution", Submitted to *International Journal of Simulation and Process Modelling*, Paper No. IJSPM-18782, Accepted July 2011, Submitted September 2010
4. D.F. Lochtefeld, F.W. Ciarallo, "Multi-objectivization via Helper-objectives with the Tunable Objectives Problem", to appear in *IEEE Transactions on Evolutionary Computation*, Paper No. TEVC-00233-2010, Accepted March 2011, Submitted July 2010
5. V. Kesaraju, F.W. Ciarallo, "Integrated Simulation Combining Process-Driven and Event-Driven Models", To appear in *Journal of Simulation*, Paper No. 10781- JOS-2010.27, accepted October 2010, Submitted April 2009
6. B. Heath, R. Hill, F.W. Ciarallo, "A Survey of Agent-Based Modeling Practices (January 1998 to July 2008)", *Journal of Artificial Societies and Social Simulation*, Volume 12, Issue 4, pp A143-A177, October 2009
7. F. W. Ciarallo, V.V. Panicker, S. Mahadevan, R.R. Hill, "A Hybrid Intelligent Logistics Diagnostic Assistant", *Journal of Decision Systems*, Volume 14, No. 3, pp. 215-240, September 2005
8. F.W. Ciarallo, R.R. Hill, S. Mahadevan, V. Chopra, P.J. Vincent, C.S. Allen, "Building the Mobility Aircraft Availability Forecasting (MAAF) Simulation Model and Decision Support System", *Journal of Defense Modeling and Simulation*, Volume 2, No. 2, pp. 57-69, April 2005.
9. Y. Xu, S. Sen, F.W. Ciarallo, "An Agent Based Data Collection Architecture for Distributed Simulations", *International Journal of Modeling & Simulation*, Volume 24, No. 2, pp. 55-64, Feb. 2004
10. C.C. Yang, F.W. Ciarallo, M.M. Marefat, "Handling Uncertainties of Robot Manipulators and Active Vision by Constraint Propagation", *Journal of Robotic Systems*, Volume 19, no. 9, pp. 427-441, Sept. 2002
11. C.C. Yang, F.W. Ciarallo, "Optimized Sensor Placement for Active Visual Inspection", *Journal of Robotic Systems*, Volume 18, No. 1, pp 1-15, 2001
12. C.C. Yang, M.M. Marefat, F.W. Ciarallo, "Interval Constraint Networks for Tolerance Analysis and Synthesis", *Artificial Intelligence for Engineering - Design, Analysis and Manufacturing*, Volume 14, No. 4, pp. 271-287, 2000
13. F.Y. Wang, T. Nan, F.W. Ciarallo, G. Qin, "Neuro-Fuzzy Networks: Adaptive Fuzzy Modeling and Control", *International Journal of Computer & Information Science*, Volume 1, No. 2, 2000
14. C.C. Yang, M.M. Marefat, F.W. Ciarallo, "Modeling Errors for Dimensional Inspection Using Active Vision", *Robotics and Computer -Integrated Manufacturing*, Volume 15, No. 1, pp. 23-37, 1999
15. R.G. Askin, F.W. Ciarallo, N.H. Lundgren, "An Empirical Evaluation of Holonic and Fractal Layouts", *International Journal of Production Research*, Volume 37, No. 5, pp. 961-978, 1999

16. C.C. Yang, M.M. Marefat, F.W. Ciarallo, "Error Analysis and Planning Accuracy for Dimensional Measurement in Active Vision Inspection", *IEEE Transactions on Robotics and Automation*, Volume 14, No. 3, pp. 476-487, 1998
17. F.W. Ciarallo, R. Akella, T.E. Morton, "A Periodic Review Production Planning Model with Uncertain Capacity and Uncertain Demand: Optimality of Extended Myopic Policies", *Management Science*, Volume 40, No. 3, pp. 320-332, 1994
18. A. Layadi, J.O. Artman, F.W. Ciarallo, "Torque, FMR and Domain Mode FMR Relations in Thin Oblique Anisotropy Axis Films", *IEEE Transactions on Magnetism*, Volume Mag-23, No. 5, 1987

Refereed Journal Publications (Under Review and Submitted)

1. S. Niranjani, F.W. Ciarallo, "Impact of Inventory Allocation Policies on Downstream Supply Variability in Multi-echelon System", Submitted to *International Journal of Logistics*, Paper No. CJOL-2011-0053, Submitted June 2011
2. D.F. Lochtefeld, F.W. Ciarallo, "Multi-objectivization via Decomposition: An Analysis of Helper-Objectives versus Complete Decomposition", Submitted to *Soft Computing*, Paper No. SOCO-D-11-00159, Submitted May 2011
3. D.F. Lochtefeld, F.W. Ciarallo, "An Analysis of Decomposition Approaches in Multi-objectivization via Segmentation", Submitted to *Applied Soft Computing*, Paper No. ASOC-D-11-00370, Submitted April 2011
4. B.L. Heath, F.W. Ciarallo, and R.R. Hill, "An Agent-Based Modeling Approach to Analyze the Impact of Warehouse Congestion on Cost and Performance", Submitted to *International Journal of Advanced Manufacturing Technology*, Paper No. #IJAMT-7601, Submitted April 2011
5. S. Niranjani, F.W. Ciarallo, "Properties of Optimal Order-up-to Levels for the Newsvendor Problem with Random Capacity: Special Cases of Demand", Submitted to *International Journal of Production Economics*, Paper No. IJPE-D-09-00406, Submitted May 2009, (in first revision)

Patents submitted

1. F.W. Ciarallo, V. Kesaraju, "Discrete event simulation tool combining process-driven and event-driven models", USPTO Application #20110040549, Provisional Application submitted May 2008, Full Application submitted May 2009

Refereed Conference Proceedings

1. G.D. Noble, F.W. Ciarallo, "A Two-Echelon Inventory System with Transshipments and Quantity Discounts", *Proceedings of the 2011 Manufacturing & Service Operations Management Conference*, Ann Arbor, MI, CD Proceedings, June 2011
2. D.F. Lochtefeld, F.W. Ciarallo, "A Diversity Classification Scheme for Genetic Algorithms", *Proceedings of the 2011 Industrial Engineering Research Conference*, Reno, Nevada, CD Proceedings, May 2011
3. B. Heath, F.W. Ciarallo, R. Hill, "An Exploratory Model of Warehouse Picking Operations with Congestion", *Proceedings of the 2010 Industrial Engineering Research Conference*, Cancun, Mexico, CD Proceedings, June 2010

4. S. Niranjana, F.W. Ciarallo, "Impact of Inventory Allocation Policies on Downstream Supply Variability in a Multi-echelon System", *Proceedings of the Manufacturing & Services Operations Management Conference*, Boston, MA, CD Proceedings, June 2009
5. S. Niranjana, F.W. Ciarallo, "Impact of Inventory Allocation Policies on Downstream Supply Variability in a Multi-echelon System", *Proceedings of the 2009 Production & Operations Management Society Conference*, Orlando, FL, CD Proceedings, May 2009
6. B. Heath, R. Hill, F.W. Ciarallo, "Replicating the Bay of Biscay: Issues in Agent-Based Modeling Validation", *Proceedings of the 2009 Industrial Engineering Research Conference*, Miami, FL, CD Proceedings, May 2009
7. S. Niranjana, F.W. Ciarallo, "Multi-Echelon Inventory System with Intermediate Product Demand: A Perspective on Allocation Policies", *Proceedings of the Manufacturing & Services Operations Management Conference*, College Park, Maryland, CD Proceedings, June 2008
8. V.S. Kesaraju, F.W. Ciarallo, "Enhanced Modeling Using Entities in an Integrated Process-Driven and Event-Driven Environment", *Proceedings of the 2007 Huntsville Simulation Conference*, Huntsville, AL, CD Proceedings, Sept 2007
9. V. Kesaraju, F.W. Ciarallo, "A Simulation Framework Combining Process-driven and Event-driven Models", *Proceedings of the IIE 2007 Research Conference*, May 2007
10. S. Niranjana, F.W. Ciarallo, "Base-Stock Levels in Multi-Echelon Inventory Systems with Multiple Intermediary Product Demands", *Proceedings of the IIE 2007 Research Conference*, May 2007
11. R. Hill, S. Mahadevan, F.W. Ciarallo, "Mobility Aircraft Availability Forecasting (MAAF) Model: A Simulation-Based Management Decision Tool", *Proceedings of the IIE 2007 Research Conference*, May 2007
12. S. Niranjana, F.W. Ciarallo, "Analysis for Base-Stock Levels in Multi-Echelon Inventory Systems with Random Capacity and Intermediary Product Demand", *Annual International Conference of the Society of Operations Management*, Ahmedabad, India, December 21-23, 2006
13. F.W. Ciarallo, S. Niranjana, "Properties of Optimal Order-up-to Levels for the Newsvendor Problem with Random Capacity: Special Cases of Demand", *Proceedings of the 2005 MSOM Conference*, June 2005
14. S. Mahadevan, R.R. Hill, and F.W. Ciarallo, "Building the Mobility Aircraft Availability Forecasting (MAAF) Simulation Model", *Proceedings of SimTecT 2005*, Sydney, Australia, May 2005
15. S. Sen, A. Dixit, Y. Xu, A.L. Barath, F.W. Ciarallo, "The Open Bit Mine: A Laboratory Test-Bed for Studying Parallel Realities", *Proceedings of the IIE 2001 Research Conference*, May 2001
16. X. Gu, M. Marefat, F.W. Ciarallo, "A Robust Approach for Sensor Placement in Automated Vision Dimensional Inspection", *Proceedings of the 1999 IEEE International Conference on Robotics and Automation*, Volume 4, pp. 2602-2607
17. K.L. Crosby, C.C. Yang, F.W. Ciarallo, M.M. Marefat, "Camera Settings for Dimensional Inspection Using Displacement and Quantization Errors", *Proceedings of the 1997 IEEE International Conference on Robotics and Automation*, Volume 3, pp. 2270-2275
18. C.C. Yang, M.M. Marefat, F.W. Ciarallo, "Tolerance Analysis and Synthesis by Interval Constraint Networks", *Proceedings of the 1997 IEEE International Conference on Robotics and Automation*, Volume 3, pp. 2522-2527

19. C.C. Yang, F.W. Ciarallo, "Minimizing the Probabilistic Magnitude of Active Vision Errors Using a Genetic Algorithm", *Proceedings of the 1997 IEEE International Conference on Systems, Man and Cybernetics*, Volume 3, pp. 2713-2718
20. F.W. Ciarallo, C. C. Yang, "Optimization of Propagation in Interval Constraint Networks for Tolerance Design", *Proceedings of the 1997 IEEE International Conference on Systems, Man and Cybernetics*, Volume 2, pp. 1924-1929
21. F.W. Ciarallo, E.H. Robinson, "Assignment of Program Units to Minimize the Number of Calls Between Memory Blocks", *Proceedings of the 1997 IEEE International Conference on Systems, Man and Cybernetics*, Volume 2, pp. 1906-1910
22. F.W. Ciarallo, C.C. Yang, M.M. Marefat, "Displacement Errors in Active Visual Inspection", *Proceedings of 1996 IEEE International Conference on Robotics and Automation.*, Volume 4, pp. 3240-3245
23. R.G. Askin, F.W. Ciarallo, "Formation of Machine and Board Cells for Circuit Card Assembly", *Proceedings of the 2nd International Conference on Engineering Design and Automation*, Maui, Hawaii, 1998, pp. 20-23
24. R.G. Askin, N. Lundgren, F.W. Ciarallo, "A Material Flow Based Evaluation of Layout Alternatives for Agile Manufacturing," *Proceedings of the 1996 International Material Handling Research Conference*, The Netherlands, pp. 37-55
25. C.C. Yang, M.M. Marefat, F.W. Ciarallo, "Analysis of Errors in Dimensional Inspection Based on Active Vision", *Proceedings of the SPIE - The International Society for Optical Engineering*, Volume 2345 (1994), pp. 96-104
26. F.W. Ciarallo, "Planning Production of Multiple Items with Uncertain Capacity, Uncertain Demand and Large Setup Costs", *Proceedings of the 1994 ORSA Technical Section on Manufacturing Management Conference*, pp. 127-132

Technical Reports

1. F.W. Ciarallo, N. Brown, S. Niranjana, "Enhancement of Winter Maintenance Material Ordering and Inventory", Ohio Department of Transportation and Federal Highway Administration Technical Report, Report Number FHWA/OH-2009/1, March 2009
2. F.W. Ciarallo, R. Celamkoti, "Constraint Management in Supply Chain Analytics", daytaOhio-NCR/Teradata, Inc. Research Report, June 2007
3. Vincent, P. J., C. S. Allen, R. Hill, and F.W. Ciarallo, C.E. Randall. Mobility Aircraft Availability Forecasting (MAAF) Model, Air Force Research Laboratory, Logistics Readiness Branch, Human Effectiveness Directorate, Report No. AFRL-HE-WP-TR-2005-0150, 2004.
4. F.W. Ciarallo, P.B. Mirchandani, "RHODES-ITMS-MILOS: Ramp Metering System Test", Final Report 481, Arizona Department of Transportation, Report No. FHWA-AZ02-481, 2002

Working Papers

1. F.W. Ciarallo, R.R. Hill, S. Chambal, "Effectively Using Statistical Tests in Operational Test and Evaluation", Working Paper.
2. F.W. Ciarallo, V.S. Kesaraju, "A Micro-simulation Test of a Modified Two-Level Optimization-Based Ramp Metering Control", Working Paper.
3. F.W. Ciarallo, V. Kaduwela, D. Lucas, K.L. Head, "A Perturbation Analysis Approach to Traffic Signal Optimization", Working Paper

4. F.W. Ciarallo, R. Akella, "Planning Production of Multiple Items with Uncertain Capacity and Uncertain Demand", Working Paper
5. F.W. Ciarallo, M.M. Marefat, X. Gu, "A Robust Approach for Sensor Placement in Automated Vision Dimensional Inspection", Working Paper
6. F.W. Ciarallo, K. Crosby., C.C Yang, and M.M. Marefat, "Visual Inspection Planning with the Sensor Constraint Graph", Working Paper
7. F.W. Ciarallo, R. Akella, G. Cornuejols, "Planning for Production of a Set of Semiconductor Components with Random Wafer and Component Yield", Working Paper

Published Abstracts

1. B. Heath, F.W. Ciarallo, R. Hill, "An Evaluation of Current Agent-based Modeling Practices and Developing the Conceptual Model for Simulation", *INFORMS Annual Conference*, San Diego, CA, October 2009
2. S. Niranjan, F.W. Ciarallo, "Supply Performance in Contemporary Multi-echelon Inventory Systems with Multiple Sources of Demand", *INFORMS Annual Conference*, Washington, D.C, October 2008
3. F.W. Ciarallo, R. Celamkoti, "Percentile-based Cycle Time Predictions That Achieve Performance Guarantees", *INFORMS International Conference*, Rio Grande, Puerto Rico, July 2007
4. S. Niranjan, F.W. Ciarallo, "Analysis for Base-Stock Levels in Multi-Echelon Inventory Systems with Intermediary Product Demand", *INFORMS Annual Conference*, Pittsburgh, PA, November 2006
5. F.W. Ciarallo, "Intersection Control Using Derivative Estimation", *Ohio Transportation Engineering Conference*, Columbus, OH, October 2004
6. Y. Xu, F.W. Ciarallo, S. Sen, "A Multi-Agent Data Collection Architecture for Distributed Simulations", *2002 Advanced Simulation Technologies Conference*, San Diego, CA, April 2002
7. S. Sen, F.W. Ciarallo, "Modeling Parallel Realities through Distributed Simulation", *IIE 2001 Research Conference*, Dallas, TX, May 2001
8. F. W. Ciarallo, S. Sundaram, "Multi-Item Production Planning with Resource Failures: Feasibility, Safety Stocks & Inventory Targets", *INFORMS National Meeting*, San Antonio, TX, November 2000
9. F.W. Ciarallo, P.B. Mirchandani, "A Simulation Model for Supporting Highway Patrol Unit Assignments", *IIE 1999 Research Conference*, Phoenix, AZ, May 1999
10. F.W. Ciarallo, M. Haouari, "Production Planning Strategies for Multiple Items with Random Capacity and Cyclic Schedules", *IIE 1999 Research Conference*, Phoenix, AZ, May 1999
11. R. Askin, F. Ciarallo and N. Lundgren, "A Comparison of Process, Fractal and Holonic Layout Strategies", *INFORMS National Meeting*, Dallas, TX, October 1997
12. L. Head, F.W. Ciarallo, D. Lucas, V. Kaduwela, "A Perturbation Analysis Approach to Traffic Signal Optimization", *INFORMS National Meeting*, Washington, D.C., May 1996
13. F.W. Ciarallo, P. Mirchandani, L. Shen, J. Wilson, "Simulation Support for Allocation of Highway Patrol Units for the Arizona Department of Public Safety", *INFORMS National Meeting*, Atlanta, GA, November 1996
14. F.W. Ciarallo, "Planning for Production of Multiple Items with a Common Component Subject to Random Yield," *INFORMS National Meeting*, New Orleans, LA, October 1995

15. F.W. Ciarallo, R. Akella, "Planning Production of Multiple Items with Uncertain Capacity and Uncertain Demand", *ORSA/TIMS National Meeting*, Boston, MA, April 1994
16. F.W. Ciarallo, R. Akella, G. Cornuejols, "Planning for Production of a Set of Semiconductor Components with Random Wafer and Component Yield", *ORSA/TIMS National Meeting*, Phoenix, AZ, November 1993
17. F.W. Ciarallo, R. Akella, G. Cornuejols and A. Kumar, "Strategies for Semiconductor Wafer Design: The Chip Allocation Problem", *ORSA/TIMS National Meeting*, Philadelphia, Pa, October 1990
18. F.W. Ciarallo, and R. Akella, "Periodic Review Models with Uncertain Demand and Uncertain Capacity", *ORSA/TIMS National Meeting*, New York, NY, October 1989

Presentations

1. "Percentile-based Cycle Time Predictions That Achieve Performance Guarantees", *INFORMS International Conference*, Rio Grande, Puerto Rico, July 2007
2. "Cycle Time Predictions with Performance Guarantees", Dept. of Quantitative Analysis & Operations Management Seminar Series, College of Business, University of Cincinnati, May 25, 2007
3. "Properties of Optimal Order-up-to Levels for the Newsvendor Problem with Random Capacity: Special Cases of Demand", *2005 MSOM Conference*, Evanston, IL, June 2005
4. "Intersection Control Using Derivative Estimation", *Ohio Transportation Engineering Conference 2004*, Columbus, OH, October 2004
5. "Derivative Estimates for a Vehicle Traffic Intersection", *INFORMS Cincinnati/Dayton Chapter*, November 13, 2003
6. "A Multi-Agent Data Collection Architecture for Distributed Simulations", *Advanced Simulation Technologies Conference*, San Diego, CA, April 2002
7. "Modeling Parallel Realities through Distributed Simulation", *IIE 2001 Research Conference*, Dallas, TX, May 2001
8. "The Open Bit Mine: A Laboratory Test-Bed for Studying Parallel Realities", *IIE 2001 Research Conference*, Dallas, TX, May 2001
9. "Multi-Item Production Planning with Resource Failures: Feasibility, Safety Stocks & Inventory Targets", *INFORMS National Meeting*, San Antonio, TX, November 2000
10. "A Robust Approach for Sensor Placement in Automated Vision Dimensional Inspection", *1999 IEEE International Conference on Robotics and Automation*, Detroit, MI, May 1999
11. "A Simulation Model for Supporting Highway Patrol Unit Assignments", *Industrial Engineering Research '99 Conference*, Phoenix, AZ, May 1999
12. "Production Planning Strategies for Multiple Items with Random Capacity and Cyclic Schedules", *IIE 1999 Research Conference*, Phoenix, AZ, May 1999
13. "Production Planning Models with Uncertain Production and Uncertain Demand", Applied Math Modeling Seminar, University of Arizona, April 1998
14. "Assignment of Program Units to Minimize the Number of Calls Between Memory Blocks", Motorola Advanced Messaging Systems Division, Fort Worth, Texas, October 1997
15. "Job Configuration for Flexible Wafer Fabs", *SRC Workshop on Operational Methods in Semiconductor Manufacturing*, University of California/Berkeley, February 1997

16. "Job Configuration for Flexible Semiconductor Wafer Fabrication", Department of Industrial and Management Systems Engineering, Arizona State University, March 1997
17. "Simulation Support for Allocation of Highway Patrol Units for the Arizona Department of Public Safety", *INFORMS* National Meeting, Atlanta, GA, November 1996
18. "Planning for Production of Multiple Items with a Common Component Subject to Random Yield," *INFORMS* National Meeting, New Orleans, LA, October 1995
19. "Production Planning in Multiple Stage Systems with Production Uncertainties", *Third Industrial Engineering Research Conference*, Atlanta, GA, May 1994
20. "Planning Production of Multiple Items with Uncertain Capacity, Uncertain Demand and Large Setup Costs", *1994 ORSA Technical Section on Manufacturing Management Conference*, Pittsburgh, PA, June 1994
21. "Planning Production of Multiple Items with Uncertain Capacity and Uncertain Demand", *ORSA/TIMS* National Meeting, Boston, MA, April, 1994
22. "Planning for Production of a Set of Semiconductor Components with Random Wafer and Component Yield", *ORSA/TIMS* National Meeting, Phoenix, AZ, November 1993
23. "Strategies for Semiconductor Wafer Design: The Chip Allocation Problem", *ORSA/TIMS* National Meeting, Philadelphia, Pa, October 1990
24. "Periodic Review Models with Uncertain Demand and Uncertain Capacity", *ORSA/TIMS* National Meeting, New York, NY, October, 1989

Masters Graduates Directed as Major Advisor

Engineering M.S. Graduates at Wright State

1. Greg Noble, "Application of Modern Principles to Demand Forecasting for Electronics, Domestic Appliances and Accessories" (Thesis), April 2009
2. Tiffany Harper, "Implementation of Simulation for Network Service Delivery Point Capacity Analysis" (Thesis), December 2008
3. Nicholas Brown, "An (R,S)-Inventory Policy for Winter Maintenance Materials for the State of Ohio" (Thesis), December 2006
4. Praneeth Vutukuru, "Evaluating the Impact of Retailer Gaming and Supplier Capacity Allocation on Supply Chain Costs" (Thesis), September 2006
5. Rupa Celamkoti, "Enhancing the Supply Chain Analytics by Estimating Cycle Time as a Function of Uncertainty (Thesis), September 2006
6. Lakshmi Yenumula, "Derivative Control of Traffic Intersections: Implementation and Comparisons" (Thesis), November 2005
7. Vishnu Kesaraju, "A Micro-simulation Test of Two-Level Optimization-Based Ramp Metering Controls" (Thesis), September, 2005
8. Suman Niranjana, "Properties of Optimal Order-Up-To Levels for the Newsvendor Problem with Random Capacity: Special Cases of Demand" (Thesis), September 2005
9. Vinu Panicker, "Intelligent A Hybrid Architecture Combining Artificial Neural Networks and Rule Based Systems For Diagnosis of The Mobility Aircraft Availability Forecasting Model" (Thesis), June 2005

Logistics & Supply Chain Management M.S. Graduates (Business) at Wright State

10. Dennis DeRenzo, "Improvement in Productivity and Reduction of Waste using Lean Principles at Johnson and Johnson, Health Care Systems", (Project, RSCOB/ISOM), January 2009
11. Peter Savard, Judy Stickel, James Glynn, William McCabe (Co-Advisor with A. Sengupta), "Modular Emergency Medical System: Can RFID Be Integrated Into the Current Supply Chain Management Process?", (Project, RSCOB/ISOM), January 2009
12. Dan Davidson, Kirk Pearson, "Network Rationalization at Nash Finch Co." (Project, RSCOB/ISOM), January 2007
13. John Bowler, "Xyz Corp. Transitioning From "Push" To "Pull" Inventory Management" (Project, RSCOB/ISOM), January 2007
14. Christian Keller, "Analysis and Recommendation to Improve the Supply Sales Forecast to Maintenance: Maintenance & Supply Requirements Collaboration in the Air Force" (Project, RSCOB/ISOM), January 2006

Students at Arizona

15. Sridhar Sundaram, "Multiple Item Production Systems with Random Machine Failures" (Thesis), May 2001
16. Dean Reyniers, "Analysis, Amalgamation and Implementation of Quality and Software Engineering Concepts" (Project), November 2000
17. Amy Lynne Ruhle/Randy Burgess, "Analysis of Final Assembly and Check-out Operations at Raytheon Missile Systems" (Project), August 2000
18. Sandrine Buyschaart, "Simulation of Intermodal Transfer Facilities at BNSF" (Project), August 2000
19. Veritas Bennett, "Analysis of Guidance Section Production at Raytheon Missile Systems" (Project), August 2000
20. Jennifer Horne, "Transitioning from Research and Development to Production" (Project), November 1999
21. Karnum Shashidar, "A Computational Study of Heuristics for Production Planning of Semiconductor Sets" (Thesis), August 1999
22. Bharathram Sundaraman, "ARENA Based Simulation of a Perturbation Analysis Approach to Traffic Signal Optimization" (Thesis), July 1999
23. Kris Nabours, "Simulation and Analysis of Target Detection Device Production Methods" (Project), November 1998
24. Peter Heath/Kevin Matthies, (Co-Advisor with Jeff Goldberg), "Distributed Processing Performance Predictor" (Project), March 1998
25. David Schmutz, "Integrated Test Equipment Metric System for Software" (Project), April 1998
26. Bob Futch, "Simulation and Analysis of Dual Model Production for Rolling Airframe Missile" (Project), April 1998
27. Jim Entwistle, (Co-Advisor with Pitu Mirchandani), "Communication Planning and Optimization (Project)", April 1998
28. Kevin Crosby, (Co-Advisor with Michael Marefat), "Visual Inspection Planning with Error Reduction (VIPER)" (Thesis), June 1997

Masters Students Directed (in progress)IHEPh.D. Students Directed as Major AdvisorPh.D. Students at Wright State (graduated)

1. Darrell Lochtefeld, Final defense in May 2011, Dissertation Title: "Multi-Objectivization in Genetic Algorithms"
2. Brian Heath, (Co-Advisor (50%) with R. Hill), Final defense in February 2010, Dissertation Title: "The History, Philosophy and Practice of Agent-Based Modeling and the Development of the Conceptual Model for Simulation Diagram"
3. Vishnu Kesaraju, Final defense in March 2009, Dissertation Title: "An Integrated Simulation Environment Combining Process-Driven and Event-Driven Models"
4. Suman Niranjana, Final defense in July 2008, Dissertation Title: "A Study of Multi-Echelon Inventory Systems with Stochastic Capacity and Intermediate Product Demand", Current position: Assistant Professor, Savannah State University (as of Summer 2010)

Ph.D. Students at Wright State (in progress)

5. Greg Noble, Ph.D. Candidate, Research Proposal completed in April 2011, Candidacy Exam completed January 2010
6. Vic Middleton, Ph.D. Candidate, Candidacy Exam completed in January 2010
7. Anthony Bourne

Ph.D. Students at Arizona (graduated)

Christopher C. Yang, Co-Advisor (50%) with M. Marefat. Dissertation Title: "CAD-Based Active Vision Inspection, Accuracy Analysis, and Tolerance Design", August 1997, Current Placement: Associate Professor in Computer Science and Information Systems at the University of Hong Kong, Hong Kong

Ph.D. Committees (in progress)

- 2007 (Wright State) Rachel Kinsler (Proposal)
- 2006 (Wright State) Rachel Kinsler (Cand)
- 2005 (Wright State) Vikrant Chopra (Cand)
- 2004 (Wright State) Rakesh Dave (Research Proposal)
- 2003 (Wright State) Rakesh Dave (Cand)

Ph.D. Committees (completed)

- 2009 (Wright State) Sriram Mahadevan (Final Defense)
- 2008 (Wright State) Doug Meador (Final Defense)
- 2007 (Wright State) Sriram Mahadevan (Proposal)

2006 (Wright State) Govind Bharwani (Proposal , Final Defense), Subhashini Ganapathy (Final Defense), Fawaz Al Kareean (Proposal , Final Defense), Phani Adduri (Final Defense)
 2005 (Wright State) Sriram Mahadevan (Cand), Fawaz AL Kareean (Cand)
 2004 (Wright State) Phani Adduri (Research Proposal)
 2003 (Wright State) Subhashini Ganapathy (Cand, Research Proposal)
 1998 (Arizona) Ling Shen (Final), Hong-Ku Park (Prelim)
 1997 (Arizona) Ling Shen (Prelim), Yuanshu Huang (Prelim), Jessica Lin (Final)
 1996 (Arizona) Jian-Min Li (Final)
 1995 (Arizona) Hungman Kim (Final), Ming Zhou (Final)
 1994 (Arizona) Hungman Kim (Prelim), Ming Zhou (Prelim), Patrick Homer (Final, C.Sc.)

Masters Committees (completed)

2010 (Wright State) Lavanya Pillala
 2008 (Wright State) Sudha Khambhampati, Meenakshi Prajapati
 2007 (Wright State) Eric Marsh
 2006 (Wright State) Todd Hausmann, Hitesh Deepak
 2005 (Wright State) Jay Mandal
 2004 (Wright State) Chaitr Hiremath, Ben Gerlach, Balakrishna Nadkarni, S. Priya Velayudhan
 2003 (Wright State) Sriraram Mahadevan
 2000 (Arizona) Robert Manthy
 1999 (Arizona) Ram Doraiswamy, Tom Stultz, Rajeev Arora, Angel Crespo, Pingzhong Li, Idith Suarez
 1998 (Arizona) Tim Christopherson, Kaustabh Deshpande, Dan Devalk/Grant Schmieder, Bob Futch, Dongfang Ge, Anna Kniazian, Xu Lin, Desikan Madhavanur, Ed Parker, Zhuofeng Shan, Ron Williams, Jin Xiao
 1997 (Arizona) Bing Shen, Robert Johnston, Nick Lundgren, Yesim Tokat, Trev Anderson
 1996 (Arizona) Ling Shen, Ram Balasubramaniam, Andrea Bentz, Jeremy Duke/Eric Taipale, Oktay Gumus/Jefferey Jo
 1995 (Arizona) Jamie Robinson, Cassandra Fleetwood, Liheng Zhang, Debra Messina
 1994 (Arizona) Simon Moskowitz, Miguel Morna-Freitas

Grants and Funding while at Wright State (* indicates external funding)

\$242,000 in external funding (\$295,000 total including internal funding) as Principal Investigator or Co-PI at Wright State since 2003.

\$3,000, 1 year, Professional Development Grant, Wright State U., Principal Investigator, May 2010

* \$13,000, 1 year, "Evaluation, Benchmarking and Improvements of Statistical Forecasting", Principal Investigator, Royal Phillips Electronics, March 2008

- * \$50,000, 1 year, “Constraint Management in Supply Chain Analytics”, Principal Investigator, WCI-ADMA (DaytaOhio)/Teradata (A Division of NCR), WCI (DaytaOhio) and Wright State, September 2005
- * \$123,693, 2 years, “Enhanced Winter Maintenance Material Inventory Management and Processes”, Principal Investigator, Ohio Department of Transportation, September 2005
- \$10,000, 1 year, “Low Cost, Adaptive Signal Control of a Traffic Intersection Based on Derivative Estimates”, Principal Investigator, Research Challenge/Research Initiation Grant, Wright State U., Principal Investigator, April 2005
- \$15,000, 1 year, “Augmentation of Winter Maintenance Material Inventory Management and Processes”, Research Challenge Early Start/Augmentation Grant, Wright State U., Principal Investigator, December 2004
- * \$55,000, 1 year, “Simulation Approach for Mobility Aircraft Availability Forecasting”, Co-PI with Raymond Hill, September 2003
- \$25,000, 1 year, “Uncertainty Modeling & Performance Evaluation in Production & Traffic Systems”, Research Challenge Grant, Wright State U., Principal Investigator, August 2003

Grants and Funding while at Arizona (* indicates external funding)

- * \$58,000, 1 year, "A Simulation Tool for Design and Evaluation of Intermodal Transport Facilities", Principal Investigator, with Pitu Mirchandani, Arizona Department of Transportation, January 2000
- * \$1,000, "MSOM Millenium Project Grant", Principal Investigator, Manufacturing and Service Operations Management Society, *The Institute for Operations Research and the Management Sciences*, October 1999
- * \$999,389, 3 years, "A Simulation Platform for Experimentation and Evaluation of Distributed-Computing Systems (SPEED-CS)", Co-PI with Suvrajeet Sen (SIE), Bernard Ziegler (ECE), Richard Schlichting (CS), National Science Foundation, June 1999
- * \$100,000, 1 year, "RHODES-ITMS Ramp Metering Field Test", Co-PI with Pitu Mirchandani, Arizona Department of Transportation, August 1998
- * \$2,500, "MSOM Electronic Communications Initiative Grant", Principal Investigator, Manufacturing and Service Operations Management Section, *The Institute for Operations Research and the Management Sciences*, April 1998
- \$30,000, 1 year, "SIE Undergraduate Lab Upgrade", College of Engineering & Mines, Co-PI with Jeffrey Goldberg, April 1998
- * \$3319, "Grant for *DPL* and *ProModel* software for use in the Raytheon/SIE Masters Program", Raytheon Co., August-October 1998
- * \$3000, "Borland Curriculum Grant" (#0129), 15 licenses each for *Borland C++* and *Delphi* software, Approximate value: June 1997
- * \$15,000, 1 year, "Simulation Model for Highway Patrol Units Assignments", Co-PI with Pitu Mirchandani, Arizona Department of Public Safety, June 1996
- \$20,000, 1 year, "SIE Instructional Computing Lab", Principal Investigator, University of Arizona Instructional Computing Small Grant Program, January 1996
- \$5000, "Production Planning Software Incorporating Uncertainties", Principal Investigator, University of Arizona Vice President for Research Small Grants Program, May 1994
- \$4500, "Intelligent Flexible Computer Integrated Inspection Based on CAD Solid Models", Co-Investigator with Michael Marefat, AIMST Seed Grant Program, January, 1993

Teaching ExperienceCourses at Wright State:

ISE 195	Introduction to Industrial & Systems Engineering (Spring 2010)
EGR 702	Systems Engineering & Analysis (Winter 2009, Winter 2010)
EGR 705	Design and Analysis of Engineering Experiments (Fall 2008, Fall 2009)
IHE/HFE 602/699	Engineering Statistics I (Fall 2003, Winter 2004, Fall 2004, Winter 2005, Fall 2005, Winter 2006, Fall 2006, Winter 2007, Fall 2007, Winter 2008, Fall 2008)
ISE 302/HFE 699	Engineering Statistics II (Winter 2004, Winter 2005, Winter 2006)
ISE483/HFE683	Integrated Systems for Manufacturing (Spring 2003, Spring 2004, Spring 2005, Spring 2006, Spring 2007, Spring 2008)
IHE/HFE 735	Advanced Systems Models (Spring 2004, Spring 2006, Spring 2007, Spring 2008)
ISE 472	ISE Senior Design I (Fall 2007)
ISE 473	ISE Senior Design II (Winter 2004, Winter 2005, Winter 2006, Winter 2007, Winter 2008, Winter 2009, Winter 2010)

ISE 474 ISE Senior Design III (Spring 2004, Spring 2005, Spring 2006, Spring 2007,
 Spring 2008, Spring 2009, Spring 2010)
MS 793 Inventory Management & Supply Chain Operations (Fall 2005, Spring 2006,
Spring 2007, Spring 2008, Spring 2009, Fall 2009, Spring 2010)

Courses at Arizona

SIE 230/305	Introduction to Engineering Probability and Statistics (Spring 1996, Spring 1997)
SIE 370	Design of Computer Systems (Spring 1998)
SIE 377	Software for Engineers (Fall 1994, Fall 1995, Fall 1997)
SIE 431/531	Simulation Modeling & Analysis (Fall 1994 to Fall 1995, Fall 1996 to Fall 2000, Fall 2001)
SIE 531	Simulation Modeling & Analysis (Raytheon) (Fall 1997, Spring 1999, Fall 1999)
SIE 462	Production System Analysis (Fall 2000, Fall 2001)
SIE 562	Advanced Production Control (Fall 1996, Spring 1999, Spring 2000)
SIE 486/586	Modeling Manufacturing Systems (Spring 1996)
SIE 631	Topics in Simulation (Spring 1995)

Courses at Univ. of California - Berkeley

BA 204	Intro. to Operations Management, Spring 2001 (2 Sections, MBA Core)
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Academic Service

University Appeals Committee, 2008-2009

ISE/HFE Faculty Search Committee Chair, 2008

Industrial & Human Systems Focus Area Chair, Ph.D. in Engineering, 2008-2009

ISE Marketing Committee, 2008-2009

CECS Faculty Development Committee, 2007-2009

BIE Faculty Development Committee, BIE Dept, 2006-Current

ISE Curriculum Committee Chair, BIE Dept., Wright State U., 2003 - 2010

P&T Appeals Committee, Wright State U., Spring 2007

CECS Strategic Planning Advisory Committee, Wright State U., Fall 2006, Spring 2009, Spring 2010

Program Affairs Committee, Ph.D. in Engineering, CECS, Wright State U., 2008-09

Student Affairs Committee, Ph.D. in Engineering, CECS, Wright State U., 2005-06, 2010

ISE Continuous Curriculum Improvement Committee, BIE Dept., Wright State U., 2004, 2005

IIE Student Chapter Faculty Advisor, BIE Dept., Wright State U., 2003-2007

CECS Curriculum Committee, BIE Dept., Wright State U., Fall 2003 - Spring 2005

UCAPC Alternate from CECS, Wright State U. (2004-2005)

ISE Curriculum Committee Chair, BIE Dept., Wright State U., 2003 - 2005

Academic Program Review Committee, SIE Department, U. of Arizona, 1999-2000

Undergraduate Committee, SIE Department, 1994-97, U. of Arizona, 1999-2000

Faculty Recruiting Committee, SIE Department, U. of Arizona, 1998-99

Computer Science/CCIT Liaison, SIE Department, U. of Arizona, 1995-99

Undergraduate Academic Advisor, SIE Department, U. of Arizona, 1994-97

Student Society Advisor, SIE Department, U. of Arizona, 1993-94

SIE Personal Computer Lab Software/Hardware/Monitoring Coordinator, U. of Arizona,
1992-2001

Professional Service

Track Chair, (Co-Chair with P. Parikh), Track in Facility Logistics, *2011 Industrial Engineering Research Conference*, Reno, Nevada, 2011

Track Chair, Track in Logistics & the Supply Chain, *2010 Industrial Engineering Research Conference*, Cancun, Mexico, 2010

President, Cincinnati/Dayton Chapter of *INFORMS*, 2008

Committee Member, *INFORMS* National Chapter/Fora Committee, 2008-2009

Newsletter Editor (1994-1999) for the Manufacturing and Service Operations Management Society of *INFORMS* (www.informs.org)

Judge for Student Paper Competition, IIE Regional Student Conference, January 1994, Tucson, AZ

Webmaster (1996-2006) for the Manufacturing and Service Operations Management Society of *INFORMS*, (msom.society.informs.org)

Program committee member, *1996 International Conference on Data and Knowledge Systems for Manufacturing and Engineering*, Tempe, Arizona, October 24-25, 1996

Session Co-Chair (with C.C. Yang), invited session on "Constraints and Optimization", *IEEE Systems Man and Cybernetics Conference*, Dallas, TX, October 1997

Session Chair, invited session on "Validation and Optimization in Supply Chains", *Industrial Engineering Research '99 Conference*, Phoenix, AZ, May 23-24, 1999

Judge, 1999 Student Research Paper Competition, Manufacturing and Service Operations Management Society of *INFORMS*

Referee for technical journals including: *Management Science*, *Operations Research*, *IIE Transactions*, *Manufacturing & Service Operations Management*, *Production Planning & Control*, *Computers & Industrial Engineering*, *Journal of Production and Operations Management*, *International Journal of Production Economics*, *European Journal of Operational Research*, *International Journal of Flexible Manufacturing Systems*, *IEEE Transactions on Semiconductor Manufacturing*, *IEEE Transactions on Systems, Man and Cybernetics*, *IEEE Conference on Decision and Control*

Member, Institute for Operations Research and the Management Sciences (*INFORMS*)

Member, Institute of Industrial Engineers (*IIE*)

Outreach

- Civil Air Patrol, Engineering-Technology Program, $\frac{1}{2}$ day lecture for ISE/HFE, August 2005
- Development of computer based motion control software/hardware system for the Department of Theatre Arts, The University of Arizona, used to control scenery in the 1998 production of *Blood Brothers*
- Coordinated the "1996 Pre-Engineering Summer Workshop for Minorities and Women in Engineering" for one week during the program for 10th graders, June 12-16, 1995
- Steering Committee Member, *Arizona Council for Economic Conversion*, 1993-97

Honors & Awards

- Award for Distinguished Service, 2000, Manufacturing & Services Operations Management Society, *INFORMS*
- Academic Years 1994-95, 1996-97, 1998-99, 1999-2000 Award for Excellence at the Student Interface, Systems & Industrial Engineering, The University of Arizona
- William Larimer Mellon Fellowship (1986-1990), Graduate School of Industrial Administrations, Carnegie Mellon University
- Carnegie Mellon graduate (1986) with University Honors and *Carnegie Institute of Technology Research Honors*
- Eta Kappa Nu* (Electrical Engineering) and *Tau Beta Pi* (Engineering) Honorary Societies (1986)
- Burroughs Scholar (1985), Carnegie Mellon University