Manuel D. Rossetti, Ph. D., P. E.

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MISSION STATEMENT

My mission is to be a world-class scholar who promotes innovative teaching and research within an environment that values learning, hard work, intellectual curiosity, and collaboration.

SCHOLARLY INTERESTS

My research interests include the design, analysis, and optimization of logistics, manufacturing, health care, and transportation systems using computer simulation and operations research analytical techniques. I teach courses in computer simulation, inventory control, probability and statistics, database design, and transportation and logistics.

EDUCATIONAL BACKGROUND

Ph. D., Industrial and Systems Engineering – The Ohio State University, 1992 M.S., Industrial and Systems Engineering – The Ohio State University, 1988 B.S., Industrial Engineering – University of Cincinnati, 1985, Magna Cum Laude

PROFESSIONAL EXPERIENCE

University Professor, University of Arkansas, 7/20-Present

Director Data Science Program, University of Arkansas, 1/20-Present

Professor and Associate Department Head, University of Arkansas, 8/10 - 8/20

Director, Center for Excellence in Logistics and Distribution, 8/13 – 8/20

Associate Professor, Industrial Engineering, University of Arkansas, 8/03 - 8/10

Assistant Professor, Industrial Engineering, University of Arkansas, 8/99 - 8/03

Assistant Professor, Systems Engineering, University of Virginia, 9/93 - 6/99

Research Associate, Industrial & Systems Engineering, The Ohio State University, 9/89 - 9/92

Teaching Associate, Industrial & Systems Engineering, The Ohio State University, 9/86 - 6/89

Systems Engineer, Electronic Data Systems, Troy, MI, 7/85 - 5/86

Co-op Industrial Engineer, Union Metal Manufacturing Company, Canton, OH, 1/82 - 1/84

SELECTED HONORS AND AWARDS

- Institute of Industrial and Systems Engineering, Modeling and Simulation Division, 2020
 Teaching Award
- Outstanding Mentor, University of Arkansas, 2003, 2015, 2019
- Outstanding Faculty Advisor, IE Capstone Experience, 2017, 2018
- Voted Best IE Teacher by IE Students, 2007, 2009, 2017
- Industrial Engineering Outstanding Professor, 2015
- University of Arkansas Charles and Nadine Baum Teaching Award, 2013
- Elected into University of Arkansas Teaching Academy, 2013
- Elected as a Fellow for the Institute of Industrial Engineering, 2012
- John L. Imhoff College of Engineering Outstanding Teacher Award, 2011-12

- John L. Imhoff Chair in Industrial Engineering, 2012-2013
- Best Paper Award, Modeling and Simulation Track, IE Research Conference, 2004, 2008
- COE Outstanding Teacher Award, Department of Industrial Engineering, 2002, 2008, 2011
- COE Outstanding Service Award, Department of Industrial Engineering, 2010
- COE Outstanding Researcher Award, Department of Industrial Engineering, 2001
- UA Associated Student Government and Student Alumni Board Outstanding Teacher Nominee 2001, 2005
- University of Virginia Teaching Fellow 1997-98, \$7000 award
- University Outstanding Teaching Award Nominee, University of Virginia, 1998
- Outstanding Capstone Faculty Advisor, Systems Engineering, University of Virginia, 1998

TEACHING AND ADVISING

I support the synergy between research and teaching through the use of active and collaborative teaching methods. I am committed to improving engineering education by developing, using, and disseminating innovative teaching practices and encouraging young people to choose engineering and science as a career.

Summary

- University of Virginia: 25 offerings, average student evaluations of 4.17/5.00
- University of Arkansas: 72 offerings, average student evaluations of 4.23/5.00
- National Science Foundation S-STEM Grant, \$597,316
- 8 STEM related refereed conference papers, 7 education related national conference presentations

Courses Taught

- Undergraduate Principles of Industrial Engineering (INEG 1103), Engineering Statistics (INEG 3313), Data Processing Systems Engineering (INEG 3833), Transportation and Logistics (INEG 4633), Introduction to Simulation (INEG 4623), Simulation (INEG 3623), Database Concepts for Industrial Engineers (INEG 4833), INEG 4904 Senior Design, Design of Engineering Systems, Information Integration and Analysis, Discrete Event Stochastic Simulation, Systems Design I and II
- Graduate Database Concepts for Industrial Engineers (INEG 5833), Systems Simulation 1
 (INEG 5823), Systems Simulation 2 (INEG 6823), Analysis of Inventory Systems (INEG 5623),
 Simulation (INEG 5803), Lean Production and Inventory Control (OMGT 5613), ObjectOriented Modeling and Simulation, Discrete Event Stochastic Simulation, Case Studies for
 Systems Engineers, Queueing Theory

Doctoral, Masters, and Undergraduate Student Advising

- Doctoral Dissertations Chaired (8 completed, 3 in progress)
 - o Mohammad H. Al-Rifai' (2005), Vijith Varghese (2009), Yasin Unlu (2011), Hugh Medal (2012), Mohammad Shbool (2016), Anvar Abaydulla (2016), Payam Parsa (2017), Alireza Zadeh (2017), Pingjian Yu (TBD), Juliana Bright (TBD), Andrew Gibson (TBD)
- Doctoral Dissertation Committees (12 completed)

- Luong Tran (1997), Ravi Kalaputapu (1998), Ashley Sigrest (1998), Alisha Youngblood (2003), Peng Qu (2004), Fernado Tovia (2004), Ghazi Magableh (2004), Navadon Sortrkul (2004), Mehmet Miman (2008), Yisha Xiang (2009), Jonathan White (2010), Jingming Liu (2019)
- Masters Student Committees Chaired (18 thesis (1 in progress), 10 projects, 7 course work)
 - Patrick Delaney (thesis, 1995), Keith Stanford (thesis, 1995), Tim Turrito (thesis, 1996), Amit Kumar (thesis, 1998), Francesco Seldanari (thesis, 1999), Greg Trzcinski (thesis, 1999), Ravi Kurgong (project, 2001), Yeu-San Tee (thesis, 2001), Hin-Tat Chan (project, 2002), Ryan Daniels (project, 2003), Soncy Thomas (project, 2004), Ashish Ashlerkar (thesis, 2004), Vijith Varghese (thesis, 2005), Kiran Chittoori (project, 2005), Stephen Farris (thesis, 2005), Vikram Desai (thesis, 2006), Shikha Nangia (thesis, 2006), Seda Gumrukcu (thesis, 2007), Doug Mettenberg (2007), Josh McGee (project, 2007), Shyam Prabhu (project, 2007), Merissa Purnomo (2008), Weiyang Ye (2008), Yanchao Liu (thesis, 2008), Amit Bhonsle (project, 2008), Jason Stout (thesis, 2009), Quingbao Ni (thesis, 2010), Server Apras (thesis, 2011), Ben Riley (2011), Doug Marek (2011), Tanvir Sattar (thesis, 2012), Yaohua Chen (project, 2012), Erik Seabold (2013), Brad Hobbs (TBD), Daisha Booth (project, 2015), Keith Webb (project, 2015), Luisa Janer (thesis, 2017), Maurice Kwizera (thesis, TBD)
- Masters Thesis Committees (20 completed)
 - O Steve Spratt (1997), Bronwyn Jackson (1998), Shawn Morrow (1998), Y. Zhong (2000), Sen Lee (2001), James Oldham (2001), Derek Malstrom (2002), Chris Wessels (2005), Yisha Xiang (2006), John Sophabamixay (2007), Avishek Chhibber, (2006), Ronald Walker (2007), Hugh Medal (2008), M. Rizki, Balya, (2009), Lance Luttrel, (2009), Paiman Farrokhvar (2013), Luis Rojas (2014), Ahn Pham (2016), Barat Chivukula (2016), Yufei Gao (2017)
- Honors Students Thesis Chaired (5 completed, 1 in progress)
 - o John DeForest (2008), Joseph Castrodale (2014), Luisa Janer (2015), David Cox (2018), Luke Turner (2019), Lawson Porter (TBD)
- Honors Student Thesis Committees (1 completed)
 - o Stephen McCall (2007)
- Undergraduate Theses University of Virginia (22 completed)
 - O Cheryl Taylor (1995), Dana Druckenmiller (1995), Terra Winston (1995), Jonathan Alboum (1995), Shannan Chandler (1995), Kathy Sheffield (1995), Marjorie Boursiquot (1996), Thomas Carney (1996), Leena Chitre (1996), Joshua Motter (1996), Roger Weisenberg (1996), Christopher Smeds (1996), Shavitra Sharma (1997), James Hardiman (1997), Stephen Claughton (1997), David Mettler (1997), Brian Wynne (1997), Greg Dodson (1997), Stacia Schlosser (1998), Jason Alambra (1998), Eri Iwasaki (1998), Bryan Lipson (1998)

RESEARCH AND GRANTSMANSHIP

I strive to develop new methods and techniques that can be applied within industrial engineering practice especially in the fields of logistics, manufacturing, and health-care. I do this by identifying and solving problems within these fields that require such techniques as simulation, statistics, probability, optimization, and software development.

Summary

- Investigator on a total of 60 projects totaling over \$6.4 M
- Sole Investigator for 25 projects totaling \$1,581,826
- Principal Investigator for 53 projects totaling \$5,553,319

Funded Research Projects

- 1. Principal Investigator, "Field Automatic Data Collection on Transit Users Via Radio Frequency Identification," Transportation Research Board (\$60,250), 1995-1996.
- 2. Principal Investigator, "Investigating Robotic Fleet Incentives for Mid-Sized Hospital Facilities," Helpmate Robotics (\$18,564), Co-PI: R. Felder, 1997-1998.
- 3. Co-Principal Investigator, "Center for Mobile Information Technology: Research Center Feasibility Study," Virginia's Center for Innovative Technology (\$25,000), PI: P. Beling, Co-PI: D. Brown, J. Liebeherr, M. Mayer, W. Scherer, R. Spekman, 1997-1999.
- 4. Principal Investigator, "Field Testing and Evaluation of the Transit Integrated Monitoring System," Transportation Research Board (\$72, 684), 1998.
- 5. Principal Investigator, "Systems Analysis of Automatic License Plate Reading Technology," Virginia Department of Transportation (\$7,384), Co-PI: W. Scherer, 1998.
- 6. Principal Investigator, "Java Simulation Library (JSL): An Object-Oriented Simulation Framework in Java," USENIX The Advanced Computing Systems Association (\$14,080), 1998-1999.
- 7. Principal Investigator, "Research Stipend for Pinkie Burrell," University of Virginia Health Sciences Department of Radiology (\$15,000), 1998-1999.
- 8. Principal Investigator, "Research Stipend for Greg Trzcinski," University of Virginia Health Sciences Department of Emergency Medicine (\$5,350), 1998-1999.
- 9. Principal Investigator, "Identification and Resolution of Materials Management Software Tracking Problems and Inventory Reconciliation," Pine Bluff Arsenal (\$124,936), 1999-2000.
- 10. Principal Investigator, "The Analysis of Intermodal Choice Combinations and Pre-Positioning Strategies for Military Supplies and Material," Defense Logistic Agency (\$75,000), Co-PI: T. Collins and E. Kutanoglu, 1999-2000.
- 11. Co-Principal Investigator, "Inventory Integrity Modeling and Benchmarking," Defense Logistic Agency (\$105,000), PI: T. Collins, 1999-2000.
- 12. Principal Investigator, "Analysis of Solid Waste Collection Operations," City of Fayetteville (\$9,932), 2000.
- 13. Principal Investigator, "Analysis of Fleet Operations and Maintenance," City of Fayetteville (\$9,145), Co-PI: M. Cole, 2000.
- 14. Principal Investigator, "On-Line Benchmarking Database for Transportation Providers," Department of Transportation, Mack-Blackwell Center (\$112,020), Co-PI: T. Collins, 2000-2001.
- 15. Principal Investigator, "Review of COTS for Transportation and Logistics Planning," Defense Logistics Agency (\$50,000), Co-PI: E. Kutanoglu, 2000-2001.
- 16. Principal Investigator, "Object-Oriented Simulation of Supply Chain Networks," Arkansas Science Technology Authority (\$59,778), 2000-2001.
- 17. Principal Investigator, "WebShipCost Intermodal Transportation Linkage Cost Assessment via the WWW," Department of Transportation, Mack-Blackwell Center (\$90,950), Co-PI: H. Nachtmann, 2001-2002.
- 18. Principal Investigator, "Training and Course Materials for Transportation Applications of GIS," Department of Transportation, Mack-Blackwell Center (\$50,433), Co-PI: M. Cole, 2001-2002.

- 19. Principal Investigator, "Rick Malstrom Mack-Blackwell Fellowship for Julie Watson," Department of Transportation, Mack-Blackwell Center (\$23,107), 2001-2002.
- 20. Co-Principal Investigator, "Wal-Mart Supercenter Staffing Study and Simulation Modeling," Wal-Mart through TLI (\$50,000), PI: T. Collins, Co-PI: E. Fant, 2001-2002.
- 21. Co-Principal Investigator, "WebShipCost Quantifying Risk in Intermodal Transportation," Department of Transportation, Mack-Blackwell Center (\$78,934), PI: H. Nachtmann, 2002-2004.
- 22. Principal Investigator, "Readiness-Based Customer Wait Time Sparing within Manugistics Advanced Planning System", Naval Supply Systems Command, UA-Center for Engineering Logistics and Distribution, (\$50,000), Co-PI: E. Kutanoglu, 2002-2003.
- 23. Principal Investigator, "DLA-DDC Analysis of Military Processing Center Operations", Defense Logistics Agency, UA-Center for Engineering Logistics and Distribution, (\$50,000), Co-PI, T. Collins, 2002-2003.
- 24. Principal Investigator, "Hybrid Simulation/Analytic Models for Military Supply Chain Performance Analysis", Air Force Research Laboratory, Command, UA-Center for Engineering Logistics and Distribution, (\$96,976), 2002-2004.
- 25. Principal Investigator, "Quantifying the Effect of Commercial Transportation Practices in Military Supply Chains", Air Force Research Laboratory, Command, UA-Center for Engineering Logistics and Distribution, (\$96,258), Co-PI: S. Mason, 2002-2004.
- 26. Principal Investigator, "Modeling Sortie Generation, Maintenance, and Inventory Interactions for Unit Level Logistics Planners", Air Force Research Laboratory, Command, UA-Center for Engineering Logistics and Distribution, (\$120,864), Co-PI: R. Hill, 2003-2004.
- 27. Co-Principal Investigator, "Quantification of Logistics Capabilities.", Air Force Research Laboratory, Command, UA-Center for Engineering Logistics and Distribution, (\$119,697), PI: H. Nachtmann, 2003-2004.
- 28. Co-Principal Investigator, "Modeling and Analysis of Center Point Distribution Network," Wal-Mart UA-Center for Engineering Logistics and Distribution, (\$50,000), PI: Scott Mason, 2003-04.
- 29. Principal Investigator, "WebShipCost A Geographical Information System for Waterway Utilization," Department of Transportation, Mack-Blackwell Center, (\$144,226) \$69,658 + \$74,568 match), Co-PI: H. Nachtmann, 2003-2004.
- 30. Principal Investigator, "A Constrained Clustering Algorithm for Spare Parts Segmentation", Naval Systems Supply Command, (\$50,000), 2004-2005.
- 31. Principal Investigator, "Radio Frequency Identification and Productivity Improvements in Military Supply Chains", Defense Logistics Agency through CELDI, (\$50,000), 2004-2005.
- 32. Principal Investigator, "CELDi/CHMR TIE Project: Examining Inventory Allocation in the Health Care Value Chain", National Science Foundation, (\$100,000 = NSF \$50,000 + UA \$50,000), 2004-2006.
- 33. Principal Investigator, "CELDi/AFRL: Logistics Readiness and Sustainment", National Science Foundation, (\$777,896), Co-PIs: H. Nachtmann, E. Pohl, S. Johnson, C.S. Nam, R. Cassady, J. English, 2004-2006.
 - Sub-Project: Principal Investigator, "Simulating Technology Improvements for Maintenance Excellence," (\$137,576), 2004-2006.
 - Sub-Project: Co-Principal Investigator, "C/KC-135 Weapon System Stockage Policy Analysis," (\$135,629), PI: E. Pohl, Co-PI: J. Chimka, 2004-2006.
- 34. Principal Investigator, "Improving Inventory Record Accuracy within Retail Store Operations", Wal-Mart, Inc, CELDi, (\$50,000), Co-PIs: J. English, N. Buyurgan, 2005-2006.
- 35. Principal Investigator, "Modeling and Simulation Based Framework for Sense and Respond Logistics Concepts", AFOSR, (\$303,830), Co-PIs: E. Pohl, R. Cassady, N. Buyurgan, 2005-2006.

- 36. Principal Investigator, "Integration of Geographical Information Systems (GIS) and Logistics Planning Methods for Arkansas Rural Transportation Emergency Planning", (\$72,408) \$36,408 + \$36,000 match, Co-PIs: E. Pohl, F. Limp, 2006-2007.
- 37. Principal Investigator, "Developing and Evaluating Operationally Robust Forecasting Techniques in Military Logistics", AFOSR, (\$119,577), Co-PI: E. Pohl, 2006-2007.
- 38. Principal Investigator, "An Intermittent Demand Forecasting Tool", CELDI National Science Foundation IUCRC, (\$40,000), Co-PI: E. Pohl, 2007
- 39. Principal Investigator, "Inventory Models for Intermittent Highly Variable Demand and Safety Stock Adjustments to Meet Desired Service Level Requirements", Invistics Inc., CELDI National Science Foundation IUCRC, (\$50000), 2008
- 40. Principal Investigator, "Simulating Transportation Modes in Large-Scale Evacuation Scenarios", Department of Homeland Security, (\$50000), 2008-2009
- 41. Principal Investigator, "Simulation Methods for Ensuring Target Service Levels in Inventory Systems", Invistics Inc., CELDI National Science Foundation IUCRC, (\$50000), 2009
- 42. Principal Investigator, "Supply Chain Network Simulator Using Cloud Computing". CELDI National Science Foundation IUCRC, (\$53,334), 2010-11
- 43. Principal Investigator, "Scorecards for Lean Inventory Systems", Invistics Inc., CELDI National Science Foundation IUCRC, (\$50000), 2010
- 44. Co-Principal Investigator, "Healthcare vs. Retail Supply Chain Gap Analysis" with Ed Pohl (PI), Heather Nachtmann (co-PI), Center for Innovation in Health Care Logistics, (\$248,029), 2011-12
- 45. Principal Investigator, "Web Services for Inventory Management", Invistics Inc., CELDI National Science Foundation IUCRC, (\$50000), 2011
- 46. Principal Investigator, "A Case Study Analysis of Inventory Cost and Practices for Operating Room Medical/Surgical Items", with Ed Pohl (co-PI), Vijith Varghese (co-PI), Covidien, Inc., \$39,204, 2012
- 47. Principal Investigator, "Student Integrated Intern Research Experience (SIIRE)- A Pathway to Graduate Studies", with Kim Needy (co-PI), Micah Hale (co-PI), Ed Clausen (co-PI), Carol Gattis (co-PI), National Science Foundation, \$597,316, 2012-2016.
- 48. Principal Investigator, "A Decision Support Tool for Continuous Replenishment Program Analysis", with Ed Pohl (co-PI), Shengfan Zhang (co-PI), Covidien, Inc., CELDi National Science Foundation IUCRC, \$60,000, 2013-2014
- 49. Principal Investigator, "Impact of Lead Time Variability", DLA, CELDi National Science Foundation IUCRC, \$60,000, 2013-2014
- 50. Principal Investigator, "Variation Identification System for Operational Risks (VISOR) in Inventory Systems", CELDi National Science Foundation IUCRC, \$23,720, 2013-2014
- 51. Principal Investigator, "Analysis and Improvement of Sourcing Tools", Defense Logistics Agency, CELDi National Science Foundation IUCRC, \$60,000, 2014-2015
- 52. Principal Investigator, "Order Fulfillment and Order Receiving Process Modeling for CRP and Non-CRP Customers", with Ed Pohl (co-PI), Shengfan Zhang (co-PI), Medtronic, Inc., CELDi National Science Foundation IUCRC, \$60,000, 2014-2015
- 53. Principal Investigator, "Fabrication Division Logistics Process Modernization", with Harry Pierson, Red River Army Depot, CELDi National Science Foundation IUCRC, \$60,000, 2014-15
- 54. Principal Investigator, "BCA Process Improvement and Cost Modeling", Defense Logistics Agency, CELDi National Science Foundation IUCRC, \$60,000, 2015-2016
- 55. Principal Investigator, "Multi-Stop and Load Building Optimization Models", with Shengfan Zhang (co-PI), Medtronic, Inc., CELDi National Science Foundation IUCRC, \$60,000, 2016
- 56. Principal Investigator, "Simulation Modeling of Bulk Petroleum Supply Chains", Defense Logistics Agency, CELDi National Science Foundation IUCRC, \$60,000, 2016-2017

- 57. Principal Investigator, "Modeling the Benefits of Global Standards within Healthcare Organizations", with Ed Pohl (co-PI), Medtronic, Inc., CELDi National Science Foundation IUCRC, \$60,000, 2017
- 58. Principal Investigator, "Fast Multi-Echelon Optimization via Grouping", with Thomas Knight (co-PI), \$199,917, National Science Foundation, 2017-2019.
- 59. Principal Investigator, "SKU Classification (When Should DLA Create A SKU?)" Defense Logistics Agency, CELDi National Science Foundation IUCRC, \$60,000, 2018-2019
- 60. Principal Investigator, "Evaluating Cross-Docking Operations for Medtronic", with Shengfan Zhang (co-PI), Medtronic, Inc., CELDi National Science Foundation IUCRC, \$60,000, 2018-2019
- 61. Principal Investigator, "Multidisciplinary Data Science (MDaS) to Better Prepare STEM Students with Emerging Data Science Skills", with Bryan Hill(co-PI), Ed Pohl (co-PI), Ronna Turner (co-PI), Xintao Wu (co-PI), National Science Foundation, \$971, 493, 2019-2024

PUBLICATIONS AND PRESENTATIONS

Summary

- 1 textbook, 2 editions
- 7 edited volumes or book chapters
- 40 articles published or accepted for publication in archival journals
- 85 refereed conference proceedings papers
- 3 articles under review for publication in archival journals
- 121 national/international conference presentations
- Citations (1969), h-index (22), i10-index (42) via Google Scholar

Text Books

- 1. Simulation Modeling and Arena, 1st Edition, 2010, John Wiley and Sons, Inc.
- 2. Simulation Modeling and Arena, 2nd Edition, 2015, John Wiley and Sons, Inc.

Archival Journals - Under Review

- 1. Rossetti, M. D. and Varghese, V. (2019), "The MCARTA Technique for Intermittent Demand Forecasting", submitted for publication.
- 2. Shbool, M. and Rossetti, M. D. (2018) "Characterizing Physicians' Perspective for Managing Physician Preference Items", submitted for publication.

Archival Journals - Published or Accepted for Publication¹

- 1. Parsa, P. Shbool, M., Tanvir, S., Rossetti, M. D., Pohl, E. (2020) "A Collaborative Planning Forecasting and Replenishment (CPFR) Maturity Model", accepted for publication in the International Journal of Supply Chain Management
- 2. **Shbool, M.** and Rossetti, M. D. (2020) "Decision Making Framework for Evaluating Physicians Preference Items Using Multi-Objective Decision Analysis Principles", *Sustainability*, 12(16), 6415; https://doi.org/10.3390/su12166415
- 3. **Sheikh-Zadeh, A.**, Rossetti, M. D., Scott, M. (2020) "Performance-Based Inventory Classification Methods for Large-Scale Multi-Echelon Replenishment Systems", *Omega: The International Journal of Management Science, to appear.*

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¹ Bold indicates a student

- 4. **Sheikh-Zadeh, A.**, Rossetti, M. D. (2020), "Classification Methods for Problem Size Reduction in Spare Part Provisioning", *International Journal of Production Economics*, vol. 207, pp. 99-114.
- 5. **Sheikh-Zadeh, A.,** Farhangi, Hadi, Rossetti, M. D. (2020), "Inventory Grouping and Sensitivity Analysis in Multi-Echelon Spare Part Provisioning Systems", *Computers and Industrial Engineering*, Vol. 14, May.
- 6. **Parsa, P.,** Rossetti, M. D., Zhang, S. & Pohl, E. A., (2017) "Quantifying the Benefits of Continuous Replenishment Program for Partner Selection". *International Journal of Production Economics*, vol. 187, pp. 229-245
- 7. **Al-Rifai' M. H.**, Rossetti, M. D., **Zadeh, A**. (2016) "A Heuristic Optimization Algorithm for Two-Echelon (R, Q) Inventory Systems with Non-Identical Retailers", *International Journal for Inventory Research*, vol. 3, No. 2., pp. 166-193
- 8. **Medal, H.**, E. Pohl, and M. Rossetti (2015). "Allocating Protection Resources to Facilities When the Effect of Protection is Uncertain", *IIE Transactions*, Published online: 04 Sep 2015, DOI:10.1080/0740817X.2015.1078013
- 9. Wu, D., Rossetti, M. D., **Tepper, J**. (2015) "Possibility of Inventory Pooling in China's Public Hospital and Appraisal about its Performance", *Applied Mathematical Modeling*, vol. 39, no. 23-24, pp. 7277-7290.
- 10. Xiang, Y. and Rossetti M. D. (2014) "The Effect of Backlog Queue and Load-building Processing in a Multi-echelon Inventory Network", *Simulation Modeling Practice and Theory*, Volume 43, Pages 54–66
- 11. **Medal, H.,** C. Rainwater, E. Pohl, and M. Rossetti (2014). A Bi-objective Analysis of the R-All-Neighbor P-Center Problem, *Computers and Industrial Engineering*, 72, 114–128.
- 12. **Medal, H.,** Pohl, E., Rossetti, M. (2014) "A Multi-objective Integrated Facility Location-Hardening Model: Analyzing the Pre- and Post-Disruption Tradeoff", *European Journal of Operational Research*, Volume 237, Issue 1, Pages 257–270
- 13. **Ni, Q.** and Rossetti, M. D. (2013) "Simulation Evacuation Modeling of a Commercial Shopping District", *International Journal of Mass Emergencies and Disasters*, vol. 31, no. 1
- 14. **Varghese, V.,** Rossetti, M. D., Pohl, E. **Apras, S**., and **Marek, D.** (2012) "Applying Actual Usage Inventory Management Best Practice in a Healthcare Supply Chain", *International Journal of Supply Chain Management*, vol. 1., no. 2., pp. 1-10
- 15. Rossetti, M. D. and **Unlu, Y**. (2011) "Evaluating the robustness of lead time demand models", *International Journal of Production Economics*, Vol. 134, pp. 159-176, DOI:10.1016/j.ijpe.2011.06.010
- 16. Tovia, F., Cassady, C. R., Rossetti, M. D., Brooks, R. (2011) "Modeling and Analysis of Service Parts Logistics Systems," *International Journal of Operational Research*, Vol. 10, No. 1, pp. 60-81.
- 17. Rossetti, M. D. and **Achlerkar, A.** (2011) "Evaluation of Segmentation Techniques for Inventory Management in Large Scale Multi-Item Inventory Systems", *International Journal of Logistics Systems Management*, Vol. 8, No. 4., pp. 403-424, DOI: 10.1504/IJLSM.2011.039598
- 18. Rossetti, M. D., Buyurgan, N., **Bhonsle, A., Gumrukcu, S., Chittoori, K.** (2010) "An Analysis of the Effect of Inventory Record Inaccuracy in a Two-Echelon Supply Chain", *International Journal for Inventory Research*, Vol. 1, No. 2, pp. 174-208, DOI: 10.1504/IJIR.2010.031462
- 19. **Ertem, A.,** Buyurgan, N., Rossetti, M. D. (2010) "Multiple-Buyer Procurement Auctions Framework For Humanitarian Supply Chain Management", *International Journal of Physical Distribution and Logistics Management*, Vol. 40, No. 3, pp. 202-227, DOI 10.1108/09600031011035092
- 20. Buyurgan, N., Rossetti, M. D., and **Walker, R. T**. (2010) "An Analysis of Imperfect RFID Visibility in a Multi-echelon Supply Chain", *International Journal of Logistics Systems Management*, Vol. 7, No. 4, pp. 431-455, DOI: 10.1504/IJLSM.2010.035631

- 21. **Gumrukcu, S.**, Rossetti, M. D., Buyurgan, N. (2008) "Quantifying the Cost of Cycle Counting in a Two-Echelon Supply Chain with Multiple Items", *International Journal of Production Economics*, v 116, pp 263-274.
- 22. Rossetti, M. D. (2008) "JSL: An Open-Source Object-Oriented Framework for Discrete-Event Simulation in Java", *International Journal of Simulation and Process Modeling*, Vol. 4, No. 1, pp 69-87.
- 23. Rossetti, M. D., **Miman, M., and Varghese, V.** (2008) "An Object-Oriented Framework for Simulating Supply Systems", *Journal of Simulation*, vol. 2, pp. 103-116.
- 24. **Al-Rifai' M. H.** and Rossetti, M. D. (2007) "An Efficient Heuristic Optimization Algorithm for a Two-Echelon (R, Q) Inventory System", *International Journal of Production Economics*, vol. 109, Issues 1-2, Sept.
- 25. Collins, T. R., Rossetti, M.D., Nachtmann, H. L., and **Oldham, J. R.** (2006) "The Use of Multi-Attribute Utility Theory to Determine the Overall Best-in-Class Performer in a Benchmarking Study", *Benchmarking International Journal*, 13(4).
- 26. **McGee, J.**, Rossetti, M.D., Mason, S. (2005) "Quantifying the Effect of Transportation Practices in Military Supply Chains", *Journal for Defense Modeling and Simulation*, Vol. 2, Issue 2, April.
- 27. Rossetti, M. D. and **Thomas, S.** (2006) "Object-Oriented Multi-Indenture Multi-Echelon Spare Parts Supply Chain Simulation Model", *International Journal for Modeling and Simulation*, Vol. 26, No. 4.
- 28. Rossetti, M. D. and **Stanford, J. A.** (2003) "Group Sequencing a PCB Assembly System Via an Expected Sequence Dependent Heuristic", *Computers in Industrial Engineering*, vol. 45, 231-254.
- 29. Rossetti, M.D., and G.M. Clark, (2003) "Estimating Operation Times from Arrival and Departure Events", *Computers in Industrial Engineering*, No. 44, 493-514.
- 30. Rossetti, M.D., and **Y. Tee,** (2002) "A Robustness Study of a Multi-Echelon Inventory Model via Simulation", *International Journal of Production Economics*, No. 80, 265-277.
- 31. Rossetti, M. D., and **Seldanari, F.** (2001) "Multi-objective analysis of Hospital Delivery Systems", *Computers and Industrial Engineering*, Vol. 41, pp. 309-333.
- 32. Rossetti, M. D., **Kumar, A.**, and Felder, R. (2000). "Simulation of Mid-Size Hospital Delivery Processes", *Health Care Management Science*, Vol. 3, pp. 201-213
- 33. Rossetti, M. D. and **Turitto, T.** (2000) "Design of an Integrated Transit Monitoring System based on RF/ID", *International Journal of Services Technology and Management*, Vol. 1, No. 2/3, pp. 188-204.
- 34. Rossetti, M. D. and Clark G. M. (1999) "Moment Solutions for the State Exiting Counting Processes of a Markov Renewal Process", *Methodology and Computing in Applied Probability*, Vol. 1, No. 3, pp. 247-275.
- 35. Graves, S., Rossetti M., Holman J. W., **Estey C.,** Felder R., (1998) "Robotic Automation of Coagulation Analysis," *Clinica Chemica Acta*, Vol 278/2, pp. 269-279, Dec.
- 36. Rossetti, M. D. and **Turitto, T.** (1998) "Comparing Static and Dynamic Threshold Based Control Strategies", *Transportation Research Part A*, Vol. 32, No. 8, pp. 607-620.
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- 1. Zhang, S., Parsa, P., and Rossetti, M. (2019) "Selecting Products for Cross Docking Facilities", IISE Annual Conference and Expo 2019, Orlando, FL
- Parsa, P. and Rossetti, M. D. (2018) "A multi-functional metric for monitoring inventory and transportation efficiency in collaborative supply chains", IISE Annual Conference and Expo 2018, Orlando, FL
- 3. Rossetti, M. D. and **Bright J.** (2018) "Rough Cut Modeling of Bulk Petroleum Supply Chains", IISE Annual Conference and Expo 2018, Orlando, FL
- 4. **Smithey, K.,** Rossetti, M. D. and Pohl, E. (2018) "Expiration Management Practices Due to Data Standards within Healthcare", IISE Annual Conference and Expo 2018, Orlando, FL
- 5. **Bright J.** and Rossetti, M. D. (2018) "The Impact of Input Uncertainty on Inventory System Performance", IISE Annual Conference and Expo 2018, Orlando, FL
- 6. Sheikhzadeh, A., and Rossetti, M. D. (2017) "Heuristics Segmentation and Classification Methods for Problem Size Reduction in Multi-Echelon Spare Part Provisioning Systems", IISE Annual Conference and Expo 2017, May 20-23, 2017, Pittsburgh, PA.
- 7. Janer, M. L. and Rossetti, M. D. (2017) "Simulation Modeling of Experienced vs. Non-Experienced Passengers Under Non-Stationary Arrival Rates", IISE Annual Conference and Expo 2017, May 20-23, 2017, Pittsburgh, PA.

- 8. Kizito, R., Pohl, E., Rossetti, M. D. (2017) "Quantifying the Benefits of Data Standards: A Healthcare Providers Perspective", IISE Annual Conference and Expo 2017, May 20-23, 2017, Pittsburgh, PA.
- 9. Rossetti, M. D., **Bright J.** (2017) "Simulation Modeling for Capacity and Inventory Planning within the Bulk Petroleum Supply Chain", CELDi Spring 2017 Research Symposium, Fayetteville, AR.
- 10. Rossetti, M. D., **Parsa, P.,** and Zhang, S. (2016) "A Decision Support Tool for Partner Selections in a Continuous Replenishment Program", CELDi Spring 2016 Research Symposium, Atlanta GA.
- 11. Rossetti, M. D., **Bright, J.,** and Parnell G. (2016) Analysis and Improvement of Sourcing Tools, CELDi Spring 2016 Research Symposium, Atlanta GA.
- 12. Rossetti, M. D., **Bright, J.**, and Parnell G. (2016) A Multi-Objective Decision Analysis Framework for DLA Business Case Analysis, CELDi Fall 2016 Research Symposium, Columbia, MO.
- 13. Rossetti, M. D., **Parsa, P.,** and Zhang, S. (2016) A Multi-objective Route Selection Methodology for Multi-stop Trucking, CELDi Fall 2016 Research Symposium, Columbia, MO.
- Rossetti, M. D. (2016) How should logisticians think about big data?, Newsletter for Analisis de Datos Industriales, LANIA Laboratorio Nacional de Informática Avanzada, October 5th, 2016, Xalapa, Veracruz, México
- 15. **Sheikhzadeh, A.,** and Rossetti, M. D. (2016) "Inventory Segmentation Performance Improvement for Multi-Echelon Repairable Items Logistics Systems", Industrial and Systems Engineering Research Conference (ISERC), Anaheim, CA, USA. (May 2016)
- 16. **Parsa, P.,** Rossetti, M. D., Zhang, S. (2016) "The Value and Cost of CRP Relationships", The Industrial and Systems Engineering Research Conference, Anaheim, CA (May 2016)
- 17. **Parsa, P., Bin L.,** Milburn, A., Rossetti, M. D. (2016) "Methods for Analyzing Fiscal Calendar Effects within an ERP Systems", Industrial and Systems Engineering Research Conference, Anaheim, CA (May 2016)
- 18. **Sheikhzadeh, A.** and Rossetti, M. D. (2015) "Segmentation Methods for Large-Scale Multi-Echelon Service Parts Logistics Systems", Presented at the 2015 Industrial and Systems Engineering Research Conference S. Cetinkaya and J. K. Ryan, eds., May 30 June 2, 2015 in Nashville, Tenn.
- 19. Rossetti, M. D. and **Bright J.** (2015) "Compensating for the Erroneous Assumption of Constant Replenishment Lead Time", Presented at the 2015 Industrial and Systems Engineering Research Conference S. Cetinkaya and J. K. Ryan, eds., May 30 June 2, 2015 in Nashville, Tenn.
- 20. **Parsa, P.** Rossetti, M. D., Zhang, S., Pohl, E. (2015) "Partner Selection in Continuous Replenishment Programs", Presented at the 2015 Industrial and Systems Engineering Research Conference S. Cetinkaya and J. K. Ryan, eds., May 30 June 2, 2015 in Nashville, Tenn.
- 21. **Sheikhzadeh, A.**, and Rossetti, M. D. (2014, Nov.) "Segmentation Methods for Large-Scale Multi-Echelon Service Parts Logistics Systems", INFORMS Annual Meeting. San Francisco, CA.
- 22. **Webb, K**. and Rossetti, M. D. (2014) "Monte-Carlo Sensitivity Analysis of Inventory Models", 2014 Industrial Engineering Research Conference, Ed. by Y. Guan and H. Liao. Montreal, Canada.
- 23. Rossetti, M. D. and Ni, Q. (2012) "Simulation Evacuation Modeling of a Commercial Shopping District", *National Evacuation Conference*, New Orleans, LA, Feb 7-9, 2012.

- 24. Rossetti, M. D. and Ni, Qingbao (2010) "Simulating the Evacuation of a Large-Scale Commercial Shopping District A Case Study", National Evacuation Conference, Feb. 4-5, New Orleans, LA.
- 25. Rossetti, M. D. and Unlu, Y. (2010) "Simulation Methods for Ensuring Target Service Levels in Inventory Systems", CELDi Fall Meeting, Dallas Fort Worth, Oct 20th 2010.
- 26. Rossetti, M. D. (2002) "Field Testing and Design of A Transit Integrated Monitoring System", 9th Annual World Congress on Intelligent Transport Systems, Chicago, IL, October 14-17, 2002.
- 27. Rossetti, M. D., **Sang, T**., Collins, T. (2002) "Online Benchmarking for Transportation Providers", 9th Annual World Congress on Intelligent Transport Systems, Chicago, IL, October 14-17, 2002.
- 28. Rossetti, M. D., **Kincannon, M.**, Collins, T., (2002) "Simulating Non-Stationary Processes and Customer Behavior for Staffing Customer Check-Out Lines", extended abstract and presentation for The 2002 Industrial Engineering Research Conference, Orlando, Florida.
- 29. Rossetti, M. D. (2001) Panel Session on Issues in Intermodal Transportation, at the 2001 Industrial Engineering Research Conference.
- 30. Rossetti, M. D. (2001) "Supply Chain Simulation", Fourth Annual MRO Group Conference, Nashville, Tennessee, Sept 10-13, 2001.
- 31. Beling P., Rossetti, M. D. and Strickland, S. (1995) "System Requirements for a World Wide Web Learning Environment," Atlanta INFORMS 1996.
- 32. Rossetti, M. D., (2000) "Using Active and Collaborative Learning in Industrial Engineering Education", 2000 American Society of Engineering Education Conference and Exposition.
- 33. Rossetti, M. D., (2000) "Hospital Delivery System Comparison Via Computer Simulation", 2000 Industrial Engineering Research Conference.
- 34. Rossetti, M. D. "Estimating Expected Sojourn Times for a Markov Renewal Process," ORSA/TIMS Joint National Meeting, Boston April, 1994
- 35. Rossetti M. D. "Estimation of Facility Operation Times for Use in Capacity Requirements Planning", TIMS/ORSA Joint National Meeting No. 33 Orlando, Florida, April 1992.
- 36. Rossetti M. D. "Evaluating an Approximation for the Two Type Stoppage Machine Interference Model Via Simulation Optimization," TIMS/ORSA Joint National Meeting No. 31 Nashville 1991.

SERVICE

Service to the university, to professional societies, and to the community is an important aspect of enhancing the quality of academic life. I have focused my service activities on service to students, service to my academic department, and service to the industrial engineering profession.

Service to the University

- UA-Ferritor Departmental Teaching Award, Chair, 2018
- UA-Faculty Senate, Engineering Representative, 2010-Present
- UA-University Programs and Curriculum Committee, Engineering Representative, 2014-Present
- UA-Teaching Academy Nomination and Awards Committee, 2017, 2019, 2020
- UA-University Program Review Committee, 2010-2015

- UA-Teaching Council, Chair, 2012-2013
- UA-All University Academic Integrity Board, COE-Alternate, 2011
- UVA-University Teaching Resource Center Portfolio Mentor 1996-98

Service to the College

- UA-College of Engineering Promotion and Tenure Committee, 2016-Present
- UA-College of Engineering Academic Programs Committee, 2010-Present, Chair 2014-Present
- UA-College of Engineering Strategic Planning Committee, 2004-2008, 2014-2016
- UA-College of Engineering Co-op Committee, 2011-2015
- UA-College of Engineering Ad Hoc Sophomore Retention Committee, 2011
- UA-College of Engineering External Mentor Program Committee, 2007-2012
- UA- College of Engineering ABET Committee, 2000-2009
- UA- College of Engineering Web Committee, 2000
- UA- College of Engineering Tech Summit Conference, Reviewer/Judge, 2001-2002
- UVA-SEAS Rules and Courses Committee, 1997-1999
- UVA-SEAS ENGR 208 Advisory Committee, 1995-1997
- UVA-SEAS Library Committee, 1994-1997
- UVA-SEAS Ad Hoc Committee on Professional Development, 1996
- UVA-SEAS First Year Advisor, 1998
- UVA-SEAS 1997 Engineering Open House for Underrepresented Students (Panelist)

Service to the Department

- UA-IE Personnel Committee Member, 2009-Present, Chair 2009, 2016-Present
- UA-IE-OMGT-EMGT Curriculum Committee, 2017-Present
- UA-IE Strategic Planning Committee, 2015-2017
- UA-IE Ferritor Award Committee Ad Hoc, 2017
- UA-IE Faculty Search Committee, 2001-2005, 2010-2011, 2014-2015, Chair 2003-2004, 2012-2013
- UA-IE Scholarship Committee, 2010-2016
- UA-IE ABET Committee (Chair), 2000-2009
- UA-IE Graduate Studies Committee (Member), 2002-present, Chair 2009
- UA-IE Undergraduate Studies Committee (Member, 1999 2000), (Chair, 2001 2009)
- UVA-SE Space, Laboratory, & Equipment, 1997-1999
- UVA-SE Graduate Studies Committee, 1997-1999
- UVA-SE Transfer Student Advisor, 1997-1999
- UVA-SE Newsletter/Promotion Committee, 1993-1997
- UVA-SE Events Committee (SEAS Parent's Day, Open House, Major's Night), 1993-1997

Professional Associations

- Fellow of the Institute of Industrial Engineers, 2013 Present
- Associate Member of the Institute for Operations Research and Management Science (INFORMS), 1988 - Present
- Member of INFORMS College on Simulation, 1999 Present

- Associate Member of the Institute of Industrial Engineers, 1985 2003
- Senior Member of the Institute of Industrial Engineers, 2004-2012
- Member of the Society for Computer Simulation, 1988-2003
- Member of American Society for Engineering Education (ASEE), 1999 Present
- Member of the International Institute of Forecasters, 2008-2010
- Member of The Operational Research Society, 2007-Present
- EIT Registration State of Ohio
- Professional Engineer, State of Arkansas, 2002 Present

Professional Service

- 2024 General Chair, 2024 Winter Simulation Conference
- Editorial Advisory Board, Journal of Defense Analytics and Logistics, 2016-present
- 2015 Program Chair, 2015 Winter Simulation Conference
- 2013 Publicity Chair, 2013 Winter Simulation Conference
- 2009, College of Engineering Outstanding Service to Students Award Industrial Engineering
- Program Committee Proceedings Co-Editor 2009 Winter Simulation Conference
- NSF Panelist, SBIR Program, Information Technology Applications, 2006 present
- National Defense Science and Engineering Graduate Fellowship Program Reviewer, 2016-17
- Research Grants Council, Hong Kong, 2006-2009
- Program Committee Proceedings Co-Editor 2004 Winter Simulation Conference
- Associate Editor for International Journal of Modeling and Simulation, 2000 present
- Program Committee Publications Chair 2000 Winter Simulation Conference
- Associate Editor, Queueing Section of International Abstracts in Operations Research, 1997-1999
- Referee for Journal of Defense Modeling and Simulation, Maritime Policy & Management, International Journal of Inventory Research, Military Operations Research, Simulation Modeling and Practice, Journal of Defense Analytics and Logistics, Production and Operations Management, European Journal of Operational Research, Management Science, Computers and Industrial Engineering, International Journal of Modeling and Simulation, Health Care Management Science, International Journal for Simulation and Process Modeling, Journal of Defense Modeling and Simulation, IIE Transactions, International Journal of Production Economics, Journal of Business Logistics, Journal of Scheduling, Journal of Operational Research, Winter Simulation Conference, Industrial Engineering Research Conference, IEEE Intelligent Transportation Systems Society Conference,
- Session Chair Winter Simulation Conference 1997, 1998, 2000, 2004-present
- Judge/Referee for IIE OR Division Application Award
- Advisor, National Society of Black Engineers UVA Student Chapter 1993-1999
- Wiley Reviewer for book: Applied Statistics & Probability for Engineering

Consulting

- Wal-Mart, Inc., Bentonville, Arkansas, 2000 to 2008, Simulation Analysis
- Invistics, Inc., Atlanta GA, 2008-present, inventory modeling

Community Service

Northwest Arkansas Regional Science and Engineering Fair Judge, 2008-12

- Elder, First United Presbyterian Church, Fayetteville, 2008-2011
- Education Ministry Committee Member, First United Presbyterian Church, Fayetteville, 2008-10
- Sunday School Teacher, First United Presbyterian Church, Fayetteville, 2000-2010
- Youth Ministry Committee Member, First United Presbyterian Church, Fayetteville, 2007-2010
- Analysis of Solid Waste Collection Operations, City of Fayetteville, 2000
- Analysis of Fleet Operations and Maintenance, City of Fayetteville, 2001