Claudia R. Rosales

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CURRENT STATUS

Assistant Professor, Supply Chain Management Department, Michigan State University

RESEARCH INTERESTS

- Supply chain management
- Health care operations
- Inventory models and transshipment
- Optimization and simulation modeling
- Logistics and cross-docking

PUBLICATIONS / WORKS IN PROGRESS

- "*Transfreight reduces costs and balances workload at Georgetown crossdock*", Interfaces, 39 (4), 316-328, with Dr. Michael Fry and Rajesh Radhakrishnan, 2009.

- "*Supply network design –transshipment between retailers versus allocation from a central depot*" – Working paper with Dr. Uday Rao and Dr. David Rogers. Under review at Decision Sciences Journal.

- "*Point-of-use technology enabled hybrid inventory control policy*" – Working paper with Dr. Michael Magazine and Dr. Uday Rao. Under review at IIE Transactions.

- "*Dispensing and controlling medical supplies at the point of use – the RFID enabled two-bin system*" - Working paper with Dr. Michael Magazine and Dr. Uday Rao. Target journal Operations Research (July 2012).

- "*Hybrid-joint replenishment policies for medical supplies*"- Working paper with Dr. Michael Magazine and Dr. Uday Rao.

- "*Multi-item Optimal Joint Replenishment Policy*" – Working paper with Dr. Michael Magazine and Dr. Uday Rao.

- "*The Impact of Drug Shortages*" – Working paper with Dr. David Closs and David Dreyfus.

EDUCATION

- Ph.D., Operations Management, Spring 2011
  College of Business, University of Cincinnati.
  Thesis: *Technology Enabled Hybrid Inventory Control Policies in Hospitals*
  Advisors: Dr. Michael Magazine and Dr. Uday Rao

- Master of Science in Quantitative Analysis, Fall 2007
  Department of Quantitative Analysis and Operations Management,
  College of Business, University of Cincinnati,
  Master Thesis: *Optimal Inbound Trailer Allocation at a Crossdock – Optimizing Operations and Balancing Workload*

- Bachelor of Science in Chemical and Industrial Engineering, Nov. 1999
  University Rafael Landivar, Guatemala City, Guatemala,

PRESENTATIONS

- "*Storing and Dispensing Medical Supplies – Taking Advantage of Technology*", Sponsored Session: Improving Efficiency in Healthcare Operations, INFORMS Annual Conference, Charlotte, NC, November 16, 2011 with Dr. Michael Magazine and Dr. Uday Rao.

- "*Dispensing and Controlling Medical Supplies at the Point-of-Use*", Invited Session: Optimizing Resources in Healthcare Delivery Systems, INFORMS Midwest Conference, Columbus, OH, August 1, 2011 with Dr. Michael Magazine and Dr. Uday Rao.

- "*Storing and Dispensing Hospital Supplies to Nursing Wards*", Supply Chain Research Symposium, Association for Healthcare Resource and Materials Management (AHRMM), Boston, MA, August 10, 2011 with Dr. Michael Magazine and Dr. Uday Rao.

- "*Storing and Dispensing Hospital Supplies to Nursing Wards – The RFID- enabled Two-Bin System*", Markov Decision Processes Session, INFORMS Healthcare Conference, Montreal, Canada, June 22, 2011, with Dr. Michael Magazine and Dr. Uday Rao.

- "*Joint Inventory Replenishment Policies in Health Care: Taking Advantage of Technology*", Healthcare Operations Management Session, Production and Operation Management Society-POMS- Annual Meeting, Vancouver, Canada, May 7-10, 2010, with Dr. Michael Magazine and Dr. Uday Rao.

- "*New inventory policies in health care: Taking advantage of technology*", Manufacturing and Service Operations Management Session, INFORMS Annual Meeting, San Diego, CA, October 11-14, 2009, with Dr. Michael Magazine and Dr. Uday Rao.

- "*Technology enabled hybrid inventory control policies in hospitals*", Sponsored Session on Optimization of Inventory in Supply Chains, INFORMS Annual Meeting, Washington D.C., October 12-15, 2008, with Dr. Michael Magazine and Dr. Uday Rao.

- *"Transfreight reduces costs and balances workload at Georgetown crossdock"*, Graduate Poster Forum, University of Cincinnati, March 7, 2008.

- *"Optimal Inbound Trailer Allocation at a Crossdock – Optimizing Operations and Balancing Workload"*, Sponsored Session on Crossdocks and Warehouses, INFORMS Annual Meeting, Seattle, WA, November 4-7, 2007, with Dr. Michael Fry and Rajesh Radhakrishnan.

- *"Demand Variability Impact in an Inventory System with Transshipments"*, presented at INFORMS Annual Meeting, San Francisco, CA, November 13-16 2005, with Dr. Uday Rao and Dr. David Rogers.

TEACHING EXPERIENCE

- SCM475 – *Decision Modeling in Supply Chain:* Michigan State University, Fall 2010, Fall and Spring 2011, and Spring 2012. Michigan State University. Two credit hour course that covers forecasting, aggregate planning, cycle and safety inventory, network design, and transportation models in supply chain.

- OM480 – *Project Management:* University of Cincinnati, Winter and Spring 2009: Four-credit hour course that covers project planning and scheduling, budgeting, resource allocation, monitoring and controlling projects, and evaluation and termination of projects.

- OM476 – *Operations Planning and Scheduling*: University of Cincinnati, Summer and Fall 2007: Three-credit hour course that covers inventory models, MRP, JIT, factory dynamics and variability.

- OM481 – *Supply Chain Management*: University of Cincinnati, Fall 2006: Three-credit hour course that covers inventory models, logistics and supply chain contracting.

- QA241 - *Business Statistics I*: University of Cincinnati, Summer and Fall 2004, Summer and Fall 2005: Three-credit hour course that covers descriptive statistics, probability and sampling distributions.

- Teaching Assistant, College of Business, University of Cincinnati, QA375 – *Introduction to Quantitative Analysis*: Winter and Spring 2005, Winter and Spring 2006, Winter and Spring 2007.

CORPORATE EXPERIENCE

- Summer Internship, Transfreight LLC, U.S.A. July – September 2006 - Developed a mixed integer linear program that provides the optimal allocation of trailers to docks for Transfreight's crossdocking operations in Georgetown, KY. The optimization model was implementation in both Excel-Visual Basic and AMPL/CPLEX environments for

small and large scale optimization problems. The model was successfully tested and resulted in savings of over $60 K/year.

- Packaging Engineer, Colgate Palmolive C.A., Sept 2002 – July 2003 - In charge of designing packaging material for production, and R&D. Responsible for managing quality initiatives in the packaging area, designing and supervising a packaging testing laboratory. Implemented cost savings projects for the area of bottle blow molding producing savings of over $450 K/year.

- Process Engineer, Colgate Palmolive C.A., Oct 1999 – Sept 2002 - Responsible for designing and monitoring formulation processes for the plastics and liquids plant. In charge of managing quality initiatives, and developed a system to avoid product microbial contamination, bringing contamination rates down to zero by year 2001. Member of the design team and responsible for the start-up of new state-of-the-art liquids and blow-molding plants which generated savings of over $800 K/year.

- Productivity Engineer / Quality Assurance, Colgate Palmolive C.A., July 1999 – Sept 1999 - Testing and verifying production quality for liquids and detergents plant; and research and development. Responsible for equipment improvement and production efficiencies in the areas of liquid products formulation and packing, plastics extrusion molding, blow molding, injection molding, and flexography. Implemented a system that increased productivity of the liquid packing operation by 40%.

HONORS AND SCHOLARSHIPS

- General Electric Fellowship (2003-2007) University of Cincinnati
- "Medalla Texaco" (Texaco Medal) award to the top ranking student in Chemical Engineering, University Rafael Landivar, Guatemala City, 1999.

AFFILIATIONS

- INFORMS – The Institute for Operations Research and the Management Sciences
- DSI - Decision Sciences Institute
- POMS - Production and Operation Management Society
- AHRMM - Association for Healthcare Resource and Materials Management
- Omega Rho International Honor Society

OTHER

- English (Fluent) / Spanish (Fluent)
- Computer Languages: C++, AMPL, CPLEX, Visual Basic, SAS
- Simulation Software: ARENA, SIGMA