

# Claudia R. Rosales

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- CURRENT STATUS

Assistant Professor, Supply Chain Management Department, Eli Broad College of Business, Michigan State University

- RESEARCH INTERESTS

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

- PUBLICATIONS

- Rosales, Claudia R., Michael Magazine, and Uday Rao. "The 2Bin System for Controlling Medical Supplies at Point-of-Use." *European Journal of Operational Research* 243, no. 1 (2015): 271-280.
- Rosales, Claudia R., Michael Magazine, and Uday Rao. "Point-of-Use Hybrid Inventory Policy for Hospitals." *Decision Sciences* 45, no. 5 (2014): 913-937. (***Received the Best Paper of the year Award in Decision Sciences Journal, 2014***)
- Rosales, Claudia R., Uday S. Rao, and David F. Rogers. "Retailer Transshipment versus Central Depot Allocation for Supply Network Design." *Decision Sciences* 44, no. 2 (2013): 329-356.
- Rosales, Claudia R., Michael J. Fry, and Rajesh Radhakrishnan. "Transfreight reduces costs and balances workload at Georgetown crossdock." *Interfaces* 39, no. 4 (2009): 316-328.

- CURRENTLY UNDER REVIEW

- "Out of stocks and supply chain design in grocery/mass merchandiser channels: insights from an agent-based model" working paper with Dr. Judith Whipple and Dr. Jennifer Blackhurst. *Currently under review at Decision Sciences Journal.*
- "Hybrid sourcing and joint replenishment of medical supplies"- Working paper with Dr. Michael Magazine and Dr. Uday Rao. *Currently under review at the International Journal of Production Research.*

## • WORKING PAPERS

- “*Optimal Sourcing Strategy and Information Sharing under Multi-ties Disruption Risk*” working paper with Jiho Yoon, Dr. Srinivas Talluri, and Claudia Rosales.
- “*Out of Stocks: Impact to Brand and Store Loyalty*” working paper with Dr. Judy Whipple and Dr. Jennifer Blackhurst.
- “*How Should Hospitals Manage Physician Preferred vs. General Medical Supplies To Reduce Spending and Improve Quality of Care?*” – Working paper with Dr. Anand Nair.
- “*Hospital Two-bin Systems under Non-Markovian Demand Processes*” – Working paper with Dr. Michael Magazine and Dr. Uday Rao.
- “*Manufacturing firm response to Supply Chain Disruptions: Impact of Operational Complexity*” – Working paper with Dr. Sriram Narayanan (working paper at data collection stage).

## • 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  
Universidad Rafael Landivar, Guatemala City, Guatemala,

## • TEACHING EXPERIENCE

### **Michigan State University - Broad College of Business**

- SCM – 475 – *Decision Modeling in Supply Chain* - Fall 2014
- SCM - 372 – *Manufacturing Planning and Control* - Spring 2014
- SCM - 475 – *Decision Modeling in Supply Chain* - Spring 2014
- SCM - 475 – *Decision Modeling in Supply Chain* - Fall 2013
- SCM - 475 – *Decision Modeling in Supply Chain* - Spring 2013

- SCM - 475 – *Decision Modeling in Supply Chain* - Fall 2012
- SCM - 475 – *Decision Modeling in Supply Chain* - Spring 2012
- SCM - 475 – *Decision Modeling in Supply Chain* - Fall 2011
- SCM - 475 – *Decision Modeling in Supply Chain* - Spring 2011
- SCM - 475 – *Decision Modeling in Supply Chain* - Fall 2010

#### **University of Cincinnati – Lindner College of Business**

- OM – 480 – *Project Management* – Winter 2009
- OM – 480 – *Project Management* – Spring 2009
- OM – 476 – *Operations Planning and Scheduling* – Fall 2007
- OM – 476 – *Operations Planning and Scheduling* – Summer 2007
- OM – 481 – *Supply Chain Management* – Fall 2006
- QA – 241 – *Business Statistics I* – Fall 2005
- QA – 241 – *Business Statistics I* – Summer 2005
- QA – 241 – *Business Statistics I* – Fall 2004
- QA – 241 – *Business Statistics I* – Summer 2004
- Teaching Assistant for QA – 375 – *Introduction to Quantitative Analysis* – Spring 2007, Winter 2007, Spring 2006, Winter 2006, Spring 2005, Winter 2005.

#### **• PRESENTATIONS**

- “Waste within the operating room”, 2014 Decision Sciences Institute’s Annual Meeting, Nov 22 2014, Tampa, FL, with Dr. Anand Nair and David Dreyfus.
- “Optimal sourcing decisions and upstream information sharing under multi-tier disruption risk in a supply chain”, 2014 Decision Sciences Institute’s Annual Meeting, Nov 22 2014, Tampa, FL, with Dr. Sri Talluri and Jiho Yoon.
- “The Impact of Demand Variability in a Centralized Healthcare Supply Chain”, INFORMS annual meeting, Minneapolis, MN, Oct 7, 2013
- “Real-Time Inventory Visibility – Is it Essential to Reduce Hospital Supply Chain Costs?”, POMS annual conference, Denver, CO, May 5<sup>th</sup>, 2013 with Dr. Michael Magazine and Dr. Uday Rao

- “*Retailer Transshipment versus Central Depot Allocation for Supply Network Design*”, INFORMS annual conference, Phoenix, AZ, October 17, 2012 with Dr. Uday Rao and Dr. David Rogers
- “*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.

#### • PROFESSIONAL SERVICE

- Reviewer for Best Student Paper Competition – POMS Conference Spring 2015.
- Served in Faculty Selection Committee for Purchasing Position Fall 2014.
- Editorial Review Board for JOM especial issue on service triads – Summer 2013
- Reviewer for Best Student Paper Competition – POMS Conference 2013.

- POMS Annual Conference 2013 Session Chair for Invited Session on Healthcare Operations Management – Models in Healthcare. May 5<sup>th</sup>. 2013.
- Served in Faculty Selection Committee for Purchasing Position Fall 2013.
- Reviewer for Handbook of Healthcare Operations Management Book, Brian Denton ed. summer 2011.
- Ad-hoc reviewer for: Production and Operations Management Journal, Manufacturing and Service Operations Management, Journal of Business Logistics, IEEE Transactions on Engineering Management, International Journal of Production Research, International Journal of Inventory Research, IIE Transactions on Healthcare Systems Engineering, Computers and Industrial Engineering Journal.

#### • GRANTS AND FELLOWSHIPS

- College of Business summer research grant (Summer 2015) - \$20,000 – for summer research support.
- Oakwood Health System (April 2014) (with Anand Nair, Department of Supply Chain Management, Michigan State University) - \$4,000 - For supporting a doctoral student for collecting data regarding waste in the operating room. (with Anand Nair)
- College of Business summer research grant (Summer 2014) - \$9,800 – For summer research support.

#### • AWARDS / SCHOLARSHIPS

- Decision Sciences Journal Best Paper of the Year Award, 2014.
- 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.

#### • 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 implemented in both Excel-Visual Basic and AMPL/CPLEX environments for small and large scale optimization problems.
- 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.
- Process Engineer, Colgate Palmolive C.A., Oct 1999 – Sept 2002 - Responsible for formulation processes for the plastics and liquids plant. In charge of managing quality initiatives.
- Productivity Engineer / Quality Assurance, Colgate Palmolive C.A., July 1999 – Sept 1999 - Testing and verifying production quality for liquids, powder detergents, and R&D. 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.

- 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, NetLogo