

# Thomas R. Robbins

East Carolina University

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## **Office Address**

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## **Education**

- PhD in Business Administration and Operations Research- Penn State Smeal College of Business, August 2007.
- Master of Business Administration - Weatherhead School of Management, Case Western Reserve University. 1989
- Bachelor of Science in Electrical Engineering - Pennsylvania State University. 1985

## **Employment History**

- East Carolina University (8/07-present)
- Pennsylvania State University (5/03-7/08)
- Aztec Software (7/02 – 4/03)
- Ernst & Young /Cap Gemini Ernst & Young (7/97-7/02)
- Advanced Graphical Applications (6/95-6/97)
- Boston Chicken (6/94-6/95)
- IBM Consulting Group (4/93-6/94)
- Ernst & Young (1/88-4/93)
- General Electric (5/85-12/87)

## **Research Focus**

Research interests

- Supply Chain / Operations Management
- Service Science, Management and Engineering
- Simulation and stochastic optimization

## **Conference Publications**

1. Robbins, T. R., D. J. Medeiros and T. P. Harrison 2007. Partial Cross Training in Call Centers with Uncertain Arrivals and Global Service Level Agreements, 2007 Winter Simulation Conference, Washington, DC.
2. Robbins, T. R 2007. Addressing Arrival Rate Uncertainty in Call Center Workforce Management. 2007 IEEE/INFORMS International Conference on Service Operations and Logistics, and Informatics, Philadelphia, PA
3. Robbins, T. R. and T. P. Harrison 2006. Manpower Planning for Call Centers with Learning Curves and Random Shocks. INFORMS Annual Meeting, 2006.
4. Robbins, T. R., D. J. Medeiros and P. Dum 2006. Evaluating Arrival Rate Uncertainty in Call Centers. 2006 Winter Simulation Conference, Monterey, CA.

5. Robbins, T. R. and T. P. Harrison 2006. Manpower Planning with Limited Hiring Opportunities-The Value of Stochastic Modeling. Seventeenth Annual Conference of POMS, Boston, MA.
6. Robbins, T. R. 2005. Supply Chain Coordination: Limitations and Impediments. Society of Marketing Advances Conference, San Antonio, TX.

### **Research in Progress**

- **Call Center Scheduling with Uncertain Arrivals and Global Service Level Agreements:** I develop a stochastic programming model for scheduling a call center subject to a strict service level agreement related to speed to answer. I formulate and solve the problem for multiple real world IT outsourcing projects. This paper is targeted for *MSOM*.
- **Optimal Cross Training in Call Centers with Demand Shocks:** I develop a model that examines cross training resources to support multiple call streams when that cross training is costly. I use a simulation to show that cross training a few agents provides the most benefit and develop a simulation based optimization approach to find optimal cross training levels. This paper is targeted for *Production and Operations*.
- **New Project Staffing for Outsourced Call Centers:** I develop a multi-stage linear stochastic program to determine the number of agents to hire for a new call center outsourcing project where volumes are uncertain, learning curve effects are present, and attrition rates are high. I seek optimal hiring levels that balance the risks of overcapacity with SLA penalties.
- **The Evolution of Services Science at IBM Business Consulting:** a case study in professional service capacity management (IBM funded research project). A draft of this case study is completed and under review by IBM.
- **Optimal Inventory Policy with Finite Horizon Service Level Agreements:** this is early stage research that examines the optimal inventory policy when the supplier is subject to uncertain demand and subject to a service level agreement. I extend the current literature by allowing for a nonstationary inventory policy and hope to show that the supplier will always prefer a longer evaluation period when he has the option of adjusting stocking levels to meet SLA requirements.
- **Risk Transfer in IT Outsourcing Contracts:** this is early stage research that looks at issues associated with risk transfer in IT/BPO outsourcing contracts.

## **Teaching History**

- Operations Management 3323 (ECU): Business Decision Modeling: an undergraduate course on quantitative decision making. Topics include decision analysis, Monte Carlo simulation, optimization, regression and time series analysis. Taught 2008-2009.
- Supply Chain Management 404 (PSU): Demand Fulfillment. an undergraduate course on supply chain management. Topics include forecasting, inventory policy, network design and transportation planning. Instructor Summer 2008.
- Supply Chain Management 405 (PSU): Manufacturing and Services Operations Management. An undergraduate course on quantitative operations management techniques including process flow analysis, inventory models, basic queuing models and statistical process control. Teaching assistant Fall 2004, Spring 2005. Instructor Summer 2005, Summer 2006, Fall 2007, Spring 2008.
- Supply Chain Management 200: Introduction to Business Statistics for Business. An undergraduate introduction to statistics. Teaching assistant Spring 2007. Instructor Summer 2007, Fall 2007, Spring 2008.

## **Other Academic/Professional Accomplishments**

- 2006-07 Dillwyn Paiste III Award for Excellence in Graduate Assistant Teaching
- IBM Research grant 2006, Capacity Management in Professional Services
- The Society of Industrial and Office Realtors (SIOR) scholarship - 2006
- APICS certified in Production and Inventory Management (CPIM). 1989
- General Electric Advanced Engineering "A" Course 1986
- Eta Kappa Nu Engineering Honor Society 1985

## **Professional Employment History**

### ***Aztec Software – Vice President (7/02 – 4/03)***

Responsible for an effort to completely rebrand this offshore development organization's market facing message and image. Reoriented the company's message from an internal, technology focused message, to an external customer value proposition oriented message by rebuilding service offerings, the company web site, and all marketing collateral. Led all strategic sales pursuits, secured several new clients and extended existing clients.

### ***Cap Gemini/Ernst & Young – Vice President (5/00-7/02) Partner (7/98-5/00)***

Responsible for selling and delivering \$8-\$10M in professional services per year. Responsible for identifying and developing target accounts, crafting solutions, account sales, and on-going account and service delivery management. Led multiple projects to reengineer clients information systems and business processes in the manufacturing, telecom and financial services industries.

### ***Ernst & Young Middle Market Consulting - Senior Manager (7/97-7/98)***

Responsible for project management activities at a major financial service account. Coordinated the sales and delivery of services from 25 E&Y consulting professionals. Managed the delivery of over \$8M in revenue over an 18month period. Served as a strategic and technical advisor to the CIO.

***Advanced Graphical Applications - Southern Region Director (12/96-6/97)***

Responsible for overall management of a regional practice of this IT consulting firm.  
Responsible for managing all sales, recruiting and consulting operations Responsible for defining and implementing new service offerings to spur growth.

***Boston Chicken - Director, Enterprise Systems Development (6/94-6/95)***

Managed a department charged with developing all non store business applications.  
Responsible for managing a development budget of \$3MM, and 20 FTEs. Responsible for recruiting consultants and full time staff. Implemented a comprehensive application portfolio starting from a clean slate.

***IBM Consulting Group (4/93-6/94)***

Joined this start up business unit to help develop service capabilities within a product focused organization. Responsible for training and mentoring consultants, marketing services, selling and managing engagements.

***Ernst & Young - Management Consulting (1/88-4/93)***

Delivered application development consulting services to several clients. Managed development projects and trained client personnel on structured development approaches. Technical lead on a multi-year manufacturing system development project. Transferred to national office and assumed responsibility for development of a commercial product.

***General Electric - Factory Automation Products (5/85-12/87)***

Systems Engineer in group responsible for developing turn-key factory automation systems, focus on real time process control.