

Leslie-Ann Asmus, Ph.D.

Summary Bio

Leslie-Ann Asmus teaches Advanced Analytics, Operations Research and Probability and Statistics courses in the EMIS department of the Bobby B. Lyle School of Engineering. She earned a M.S. and Ph.D. in Operations Research with focus on Mathematical Programming and Combinatorial Optimization from New York University and George Mason University, respectively. After teaching in the Mathematics Department of Brunel University in London, she returned to the U.S. and began a career working as a supply chain management consultant with Chesapeake Decision Sciences (now Aspentech) and later i2 Technologies (now RedPrairie) on projects ranging from financial planning, strategic planning associated with corporate mergers, supply chain capacity planning, factory planning and scheduling, and demand planning. Her clients span a wide array of industries and include BASF, Weyerhaeuser, Repsol, Seiko-Epson, Quaker Oats, Procter & Gamble, Samsung as well as at least half a dozen semiconductor companies in the U.S. and Asia. She was additionally a contractor with Frito-Lay for two years and on the team that defined and developed a daily production planning system. She joined the EMIS faculty on a part-time basis in 2002 and switched to be a full-time member upon her return from living in Shanghai in 2009.

2002-present Southern Methodist University, EMIS Department, (break 2007-2009) Lyle School of Engineering

Undergraduate Teaching: EMIS 3340 Probability & Statistics for Engineers and Applied Scientists, EMIS 3309 Information Engineering with Global Perspectives (aka Introduction to Advanced Analytics), EMIS 4395 Senior Design. Campus & J-Term Formats.

Graduate Teaching: EMIS 7300 System Analysis Methods, 7370 Probability & Statistics for Engineers and Applied Scientists, EMIS 7357 Analytics for Decision Support, EMIS 8360 Operations Research Models, EMIS 8371 Linear Programming. Campus, Distance Ed and Executive Masters formats.

Corporate Liaison: Work with corporate partners at American Airlines, Lehigh Hanson, Texas Instruments, BNSF, Lockheed Martin, and other area firms and organizations to participate as guest speakers and industry provided student analytics projects.

Undergraduate Advising: Assisted students in planning and managing their degree studies as well as job and internship pursuits.

Awards: 2011 SMU SEJC Outstanding EMIS Graduate Faculty Award and
2006 SMU SEJC Outstanding EMIS Undergraduate Faculty Award

**2002-2004 Frito-Lay Corporation, Supply Chain Group,
Independent Consultant**

Assisted in the design, development and implementation of a factory scheduling system (using mixed integer programming optimization) for an Irving Texas manufacturing plant. Ultimately, the solution was expected to roll out to 34 North American factories.

1999-2002 i2 Technologies, Inc. (Now within JDA)

**2000-2002 Solution Architect/Manager, Consumer Goods & Retail
1999-2000 Solution Architect/Manager, Semiconductor Solutions**

Worked with i2 clients first to understand current and identify next generation best practices for strategic, planning and operations decision making. Next, either provided a map to existing i2 software or defined/prioritized development of new end-to-end supply chain software. Much of this project effort involved translating clients' business interests into mathematical/data analysis frameworks and then working with i2 development teams on the design and coding of software to meet requirements that were not supported by existing i2 products. Given the clients' fundamental interests to define and run their supply and value chains as efficiently and effectively as possible, the analytics and optimization solutions that I helped architect involved an integrated approach to using following software: demand forecasting/planning; order and inventory management; replenishment, merchandise, master, factory, and transportation planning; and demand fulfillment and event management. Data management and workflows were logically incorporated and embedded within these solutions.

**1994-1999 Chesapeake Decision Sciences, Inc.
(Now within AspenTechnology)**

1997-1999 Product Development, High Tech Global Planner, Dallas, TX

Created a software product for semiconductor and silicon manufacturing Supply Chain Planning and Able to Promise. This solution considered multiple sites, stages, and capacity definitions and deals with many industry production complexities including lengthy manufacturing cycle times, frequent product transitions, binning and substitution options. Able to Promise supports online queries from customer service to ensure valid order commitments. The product used a combination of SQL macros to import and export defined data structures, linear programming, and expert systems.

1995-1997 Manager, West Coast Operations, San Jose, CA

Responsible for opening the Silicon Valley office, recruiting and mentoring consultants, managing and implementing area projects, overseeing business development, and managing office growth and operations. Responsible for relationships and overall project execution with Cypress Semiconductor, Mitsubishi Silicon America, Rockwell (Conexant) Semiconductor, Siliconix, Silicon Storage Technology and Seiko Epson Semiconductor. All projects I managed were successfully moved into production and accepted by the users. Coordinated western region interactions with "Big 5" implementation partners.

Applications for clients were developed using the MIMI software from Chesapeake Decision Sciences. MIMI is a tool kit that includes linear and integer programming optimization, simulation, expert systems, data manipulation capabilities, and graphical user interfaces that can be configured to build applications.

1994-1995 Applications Consultant, New Providence, NJ

Trained client team members, and contributed to the design and development of planning and scheduling tools for the following clients: Elastocell Company (a BASF subsidiary), Quaker Oats Corporation, Symbios Logic (acquired by LSI Logic), Repsol (Petrochemical) and Weyerhaeuser Corporation. This included the following projects.

- ◆ A production lot to order matching system using optimization and expert systems
- ◆ Strategic planning system for annual analysis using optimization & expert system
- ◆ An optimization based nationwide tactical planning tool
- ◆ A detailed job shop-scheduling and enterprise planning template using optimization, an interactive Gantt chart and expert system rules
- ◆ Optimization based single plant capacity planning model

**1992-1994 Brunel University, Department of Mathematics,
Lecturer**

Lectured courses in Operations Research, Calculus, and Statistics. Conducted research and directed Ph.D. student research in Integer Programming. Directed undergraduate senior mathematics student projects.

**1987-1989 MITRE Corporation, Communications Department
Systems Analyst**

Designed and analyzed a topology for a long-haul FAA data communications network. Developed modeling software and employed COMNET simulation programs. Worked on a team to validate expected data levels on the network.

Education

- 1993 Ph.D. Operations Research, George Mason University, Volgenau School of Information Technology and Engineering
Dissertation: "Obtaining Minimum- Correlation Latin Hypercube Sampling Plans Using Discrete Optimization Techniques", Advisor: Dr. Karla Hoffman
- 1987 M.S., Operations Research, NYU Stern School of Business (and Courant Institute of Mathematical Sciences)
"Optimizing a 48-City Traveling Salesman Problem: A Case Study in Combinatorial Problem Solving" w/ G. Rinaldi, Advisor: Dr. Manfred Padberg
- 1984 B.A., Economics and Business with Mathematics Emphasis,
McDaniel College (previously Western Maryland College), Magna cum Laude