

SUSAN M. SANCHEZ

Operations Research Department
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EDUCATION

Ph.D. in Operations Research, Cornell University, August 1986.

Major: Applied Statistics

Minors: Mathematical Programming, Mathematics

Dissertation: *Contributions to the Bernoulli Selection Problem* (directed by R. E. Bechhofer)

M.S. in Operations Research, Cornell University, May 1984.

B.S.E. (summa cum laude) in Industrial and Operations Engineering, University of Michigan, May 1981.

MAJOR FIELD

Experiment design and data analysis for statistical decision-making and simulation. Application areas include business, quality, manufacturing, and health care.

ACADEMIC EMPLOYMENT

8/00–present: *Professor*, Operations Research Department with a joint appointment in the Graduate School of Business and Public Policy, Naval Postgraduate School, Monterey, California. Also served as Associate Chair for Instruction, 4/02–6/03.

4/00–6/01: *Professor*, Management Science, College of Business Administration, University of Missouri–St. Louis.

8/99–7/00: *National Research Council Senior Postdoctorate Associate*, Operations Research Department, Naval Postgraduate School, Monterey, California.

1/93–4/00: *Associate Professor*, Management Science and Information Systems, School of Business Administration, University of Missouri–St. Louis.

7/86–12/92: *Assistant Professor*, College of Business and Public Administration, University of Arizona, Tucson, Arizona. Teaching and research in applied statistics and operations. Appointments in MIS/Decision Sciences (7/86–6/92) and Management and Policy (7/92–12/92).

8/85–6/86: *Lecturer*, Department of Management and Policy, College of Business and Public Administration, University of Arizona, Tucson, Arizona.

HONORS AND AWARDS

Richard M. Barchi Prize Nomination for “Using Agents to Model Logistics” (E.S. Wolf, S. M. Sanchez, N.C. Goerger, L.P. Brown) after Wolf’s presentation received “Best Presentation in Composite Workgroup G: Advances in OR Modeling” at the 71st MORS Symposium, June 2003.

Meritorious Service Award, *Operations Research* Editorial Board, 1998 and 1999.

Beta Gamma Sigma inductee, UM–St. Louis, Spring 1998.

Best Application Paper Award for “A Comprehensive Model for Managing Credit Risk and Forecasting Losses (with L. D. Smith and E. C. Lawrence), 1994 Decision Sciences Institute Meeting.

Meritorious Service Award, Students with disAbilities Association, UM–St. Louis, Spring 1993.

Teaching Distinction List, College of Business and Public Admin., University of Arizona, Spring 1990.

Honor Societies: Tau Beta Pi, Alpha Pi Mu, Mortar Board, Mu Sigma Rho, Beta Gamma Sigma.

Graduate fellowships: IBM Graduate Manufacturing Fellowship, Cornell University Sage Graduate Fellowship, Tau Beta Pi Graduate Fellowship.

Undergraduate fellowships: Eastman Kodak Company Fellowship, National Society of Professional Engineers/Burroughs Corporation Fellowship. University of Michigan Regent Alumni Award, William T. Branstrom Freshman Prize, Dean’s list every semester.

RESEARCH GRANTS

Marine Corps Combat Development Center grant, “Insights into the Important Factors in Command and Control: Effective Exploration of an Agent-based Simulation Using New Automatic Adaptive Search Algorithms” with Tom Lucas. (Co-Principal Investigator). Approximately \$180,000 for 10/00–12/01, \$250,000 for 1/02–3/03. Approximately \$345,000 for 7/03–6/04 from the Marine Corps Warfighting Laboratory.

NPS Research Initiation Program grant, “Adaptive Sequential Procedures for Efficient Investigation of Agent-Based Combat Simulation Models” (Principal Investigator). Travel and equipment, plus up to 10 months support as needed.

National Research Council Senior Associateship Award, “Robust System Selection.”

UMSL S201394: “Information-Driven Decision Making in Service Organizations,” as leader of a faculty research team. UMSL Research Award, \$9,525 for 4/98–5/99 (Principal Investigator).

Fellow, UMSL Public Policy Research Center, 1998–1999. One course reduction and research/travel support funds.

UMSL Small Grants Program Travel Award, \$1,000 for 1998.

UMSL Small Grants Program Travel Award, \$400 for 1996–1997.

UMSL Small Grants Program Travel Award, \$400 for 1995–1996.

UMSL School of Business Administration Research Award, Fall 1994. Reduced course load for 1995–1998 (superseded by new teaching load policy).

UMSL S200992: “Robust Design Identification Under Periodicity.” UMSL Research Award, \$10,450 for 1/94–8/95 (Principal Investigator).

DDM 9110573, DFM 9396135: “Automated Experimentation and Analysis for Robust Product Design.” \$59,996 for 1/92–12/93 from the National Science Foundation (Principal Investigator).

UA 210406: “Efficient Data Allocation for Frequency Domain Experiments.” \$2750 for 1/91–12/91 from the Small Grants Program, Office of the Vice President for Research, University of Arizona (Principal Investigator).

HS 06236: “State Regulation and the Development of Local HMO Markets,” with Douglas R. Wholey and Jon B. Christianson. \$135,471 for 5/89–9/90 from the Agency for Health Care Policy and Research (Co-Principal Investigator).

HS 05928-A101: “HMO Proliferation: Competitive Interactions in the HMO Industry,” with Douglas R. Wholey and Jon B. Christianson. Approved by the National Center for Health Services Research Small Grants Program in November 1987, but unfunded (Co-Principal Investigator).

UA Business & Public Administration Foundation: “Proliferation of HMOs: Competitive Interactions in the HMO Industry.” \$17,473 from the University of Arizona College of Business and Public Administration Foundation, summers 1987 and 1988 (Co-Principal Investigator).

TEACHING GRANTS AND DEVELOPMENT SUPPORT

CNET, Distance Learning support for completing “Interactive Distributed Learning” faculty development course.” \$12,782 for 2002.

Graduate School of Business & Public Policy, Naval Postgraduate School, 3/11 quarter support for the development of MBA core course: *Analytic Tools for Managerial Decisions*.

CNET, “Network-Based Instruction for *Introduction to Management Science*.” \$57,724 for 2000–02 (Principal Investigator).

Southwestern Bell Information Technology Grant, “Active Learning in the Virtual Classroom.” \$10,000 for 1998–1999 (Principal Investigator).

PUBLICATIONS

• Chapters in Books

Lucas, T. W., S. M. Sanchez, T. M. Cioppa, and A. Ipekci (2003). “Generating hypotheses on fighting the global war on terrorism,” *Maneuver Warfare Science 2003*, eds. Horne, G. and Johnson, S., Department of the U.S. Navy, Marine Corps Combat Project Albert: Quantico, VA, 2003: 117–136.

Lucas, T., S. M. Sanchez, L. Brown, W. Vinyard (2002). “Better designs for high-dimensional explorations of distillations.” *Maneuver Warfare Science 2002*, ed. G. Horne. Department of the U.S. Navy, Marine Corps Combat Development Command Headquarters, Quantico, VA: 17-46.

Sanchez, S. M., P. J. Sanchez, and J. S. Ramberg (1998). “A Simulation Framework for Robust System Design.” Chapter 12 in *Concurrent Design of Products, Manufacturing Processes and Systems*, ed. B. Wang. Gordon and Breach, NY: 279–314.

Sanchez, S. M., J. S. Ramberg, J. Fiero, and J. J. Pignatiello, Jr. (1993), “Quality by Design.” Chapter 10 in *Concurrent Engineering: Automation, Tools, and Techniques*, ed. A. Kusiak. John Wiley and Sons: NY, 235–286.

Wholey, D. R., J. B. Christianson and S. M. Sanchez (1990), “The Effect of State Regulation on Development of HMO Markets.” In *Advances in the Study of Entrepreneurship, Innovation, and Economic Growth*, ed. Gary Libecap, Ch. 8, 181–206, JAI Press: Greenwich, CT.

• Articles in Refereed Journals

Sanchez, S. M., F. Moeeni and P. J. Sanchez (2003). “So Many Factors, So Little Time...” Forthcoming in *Technology and Operations Review*.

Smith, L. D. and S. M. Sanchez (2003). “Assessment of Business Potential at Retail Sites: Empirical Findings from a U.S. Supermarket Chain.” *The International Review of Retail, Distribution and Consumer Research*, Vol. 13, No. 1, 37–58..

Sanchez, S. M. and P. Konana (2000). “Efficient Data Allocation for Frequency Domain Experiments.” *Operations Research Letters* 26(2): 81–89.

Moeeni, F., S. M. Sanchez and A. J. Vakharia (1997). “A Robust Design Methodology for Kanban System Design.” *International Journal of Production Research*, Vol. 35, No. 10, 2821–2838.

Sanchez, S. M., P. J. Sanchez, J. S. Ramberg and F. Moeeni (1996). “Effective Engineering Design Through Simulation.” *International Transactions on Operational Research*, Vol. 3, No. 2, 169–185.

Smith, L. D., S. M. Sanchez and E. Lawrence (1996). “A Comprehensive Model for Managing Credit Risk and Forecasting Losses on Home Mortgage Portfolios.” *Decision Sciences*, Vol. 27, No. 2, 291–317.

Vakharia, A. J., D. Parmenter and S. M. Sanchez (1996). “The Operating Impact of Parts Commonality.” *The Journal of Operations Management*, Vol. 14, 3–18.

Kannan, P. K. and S. M. Sanchez (1994). “Competitive Market Structures: a Subset Selection Analysis.” *Management Science* Vol. 40, No. 11, 1484–1499.

Wholey, D. R., J. B. Christianson, and S. M. Sanchez (1993), “The Effect of Physician and Corporate Interests in the Formation of HMOs.” *American Journal of Sociology*, Vol. 99, No. 1, 164–200.

Wholey, D. R., J. B. Christianson, S. M. Sanchez, R. F. Feldman, and M. Peterson (1992), “The Voluntary Dissemination of Performance Information by Health Care Organizations.” Lead paper in *Advances in Health Economics and Health Services Research*, Vol. 13, 1–26.

Sanchez, S. M. and J. L. Higle, (1992), “Observational Studies of Rare Events: a Subset Selection Approach.” *Journal of the American Statistical Association*, Vol. 87, No. 149, 878–883.

- Wholey, D. R., J. B. Christianson, and S. M. Sanchez (1992). “Organizational Size and Failure Among Health Maintenance Organizations.” *American Sociological Review*, Vol. 57, 1–14.
- Christianson, J. B., D. R. Wholey and S. M. Sanchez (1991), “State Responses to HMO Failures,” *Health Affairs*, special issue on managed care, Vol. 10, No. 4, 78–92.
- Wholey, D. R. and S. M. Sanchez (1991), “The Effects of Regulatory Tools on Organizational Populations.” *Academy of Management Review*, Vol. 16, No. 4, 743–767.
- Sanchez, P. J. and S. M. Sanchez (1991), “Design of Frequency Domain Experiments for Discrete-Valued Factors,” *Applied Mathematics and Computation*, Vol. 42, No. 1, 1–21.
- Christianson, J. B., S. M. Sanchez, D. R. Wholey and M. Shadle (1991), “The HMO Industry: Evolution in Population Demographics and Market Structure,” *Medical Care Review*, Vol. 48, No. 1, 3–46.
- Sanchez, S. M. (1989), “Unbiased Estimation Following Selection for Bernoulli Populations.” *Communications in Statistics—Theory and Methods*, Vol. 18, No. 11, 4275–4301.
- Sanchez, S. M. (1987), “A Modified Least-Failures Sampling Procedure for Bernoulli Subset Selection.” *Communications in Statistics—Theory and Methods*, Vol. 16, No. 12, 3609–3629.
- Sanchez, S. M. (1987), “Small-Sample Performance of a Modified Least-Failures Sampling Procedure for Bernoulli Subset Selection,” in *Communications in Statistics—Simulation and Computation*, Vol. 16, No. 4, 1051–1065.

- **Articles in Refereed Proceedings**

- Sanchez, S. M. and H.-F. Wu (2003). “Frequency-based designs for terminating simulation experiments: a peace-enforcement application,” *Proceedings of the 2003 Winter Simulation Conference*, ed. S. Chick, P. J. Sánchez, D. Ferrin, and D. J. Morrice. Institute of Electrical and Electronic Engineers: Piscataway, NJ, forthcoming.
- Sanchez, S. M. and T. Lucas (2002). “Exploring the World of Agent-based Simulations: Simple Models, Complex Analyses.” Invited paper, *Proceedings of the 2002 Winter Simulation Conference*, ed. J. L. Snowdon, J. Charnes, C-H Chen and E. Yucusan. Institute of Electrical and Electronic Engineers: Piscataway, NJ, 116–126.
- Smith, L. D. and S. M. Sanchez (2002). “Estimating Business Potential for Supermarkets: A Statistical Approach for Site Selection and Performance Review.” *DSI Conference Proceedings*, 1458–1462, November 2002.
- Sanchez, S. M. (2001). “ABC’s of Output Analysis.” Introductory tutorial in *Proceedings of the 2001 Winter Simulation Conference*, eds. B.A. Peters, J.S. Smith, D.J. Medeiros and M.W. Rohrer, 30–39. Institute of Electrical and Electronic Engineers: Piscataway, New Jersey.
- Sanchez, S. M., D. Ferrin, T. Ogazon, J. Sepulveda and T. Ward (2000). “Emerging Issues in Healthcare Simulation.” *Proceedings of the 2000 Winter Simulation Conference* eds. J. Joines, R. Barton and K. Kang, 1999–2003. Institute of Electrical and Electronics Engineers: Piscataway, NJ.
- Sanchez, S. M. (2000). “Robust Design: Seeking the Best of All Possible Worlds.” Advanced tutorial in *Proceedings of the 2000 Winter Simulation Conference* eds. J. Joines, R. Barton and K. Kang, 69–76. Institute of Electrical and Electronics Engineers: Piscataway, NJ.
- Sanchez, S. M. (1999). “ABC’s of Output Analysis.” Introductory tutorial in *Proceedings of the 1999 Winter Simulation Conference* eds. D. Sturrock, P.A. Fishwick, P.A. Farrington and H.B. Nembhard, 24–32. Institute of Electrical and Electronic Engineers: Piscataway, New Jersey.
- Sanchez, S. M. (1997). “It is a Far, Far Better Mean I Find...” Introductory tutorial in *Proceedings of the 1997 Winter Simulation Conference*, eds. S. Andradottir, K. Healy, D. H. Withers and B. L. Nelson. Institute of Electrical and Electronic Engineers: Piscataway, New Jersey.
- Sanchez, S. M., L. D. Smith and E. C. Lawrence (1996). “Sensitivity and Scenario Analysis for Simulation Metamodels.” Invited paper in *Proceedings of the 1996 Winter Simulation Conference*, eds. J. M.

Charnes, D. J. Morrice, D. T. Brunner, and J. J. Swain, 1440–1447. Institute of Electrical and Electronic Engineers: Piscataway, New Jersey.

Moeeni, F. and S. M. Sanchez (1995). “Robust JIT: A Framework for Tolerance Design.” *DSI Conference Proceedings*, November, 3 pages.

Sanchez, S. M. (1994). “A Robust Design Tutorial.” Invited advanced tutorial in *Proceedings of the 1994 Winter Simulation Conference*, eds. J. D. Tew, M. S. Mannivannan, D. A. Sadowski and A. F. Seila, 106–113. Institute of Electrical and Electronic Engineers: Piscataway, New Jersey.

Sanchez, S. M. (1994). “Experiment Designs for System Assessment and Improvement when Noise Factors are Correlated.” Invited paper in *Proceedings of the 1994 Winter Simulation Conference*, eds. J. D. Tew, M. S. Mannivannan, D. A. Sadowski and A. F. Seila, 290–296. Institute of Electrical and Electronic Engineers: Piscataway, New Jersey.

Smith, L. D., S. M. Sanchez and E. C. Lawrence (1994). “A Comprehensive Model for Managing Credit Risk and Forecasting Losses.” *DSI Conference Proceedings*, November, 1160–1162.

Moeeni, F., S. M. Sanchez and A. J. Vakharia (1994). “Implementing JIT in Uncertain Manufacturing Environments.” *DSI Conference Proceedings*, November, 1494–1496.

Sanchez, S. M., F. Moeeni and P. J. Sanchez (1994). “Assessing the Impact of Uncertainty on Kanban System Performance: A Frequency Domain Approach.” *DSI Conf. Proceedings*, November, 1782–1784.

Parmenter, D. A., A. J. Vakharia and S. M. Sanchez (1993). “Assessing the Operating Impact of Parts Commonality: A Simulation Study.” *1993 DSI Proceedings*, November, 1334–1336.

Moeeni, F., S. Replogle and S. M. Sanchez (1993), “A Framework for Kanban Systems Design,” *1993 DSI Proceedings*, November, 1617–1619.

Schruben, L. W., S. M. Sanchez, P. J. Sanchez and V. A. Czitrom (1992), “Variance Reallocation in Taguchi’s Robust Design Framework,” invited paper in *Proceedings of the 1992 Winter Simulation Conference*, 548–556. Institute of Electrical and Electronic Engineers: Piscataway, New Jersey.

Ramberg, J. S., J. J. Pignatiello, Jr. and S. M. Sanchez (1992), “A Critique and Enhancement of the Taguchi Method.” *ASQC Quality Congress Transactions*, May 1992, 491–498.

Ramberg, J. S., S. M. Sanchez, P. J. Sanchez, and L. J. Hollick (1991), “Designing Simulation Experiments: Taguchi Methods and Response Surface Metamodels,” invited State-of-the-Art Review in *Proceedings of the 1991 Winter Simulation Conference*, 167–176. Institute of Electrical and Electronic Engineers: Piscataway, New Jersey.

- **Articles in Non-refereed Proceedings**

Sanchez, S. M. and G. Hynes (2001), “Assessment and perception of online communication skill acquisition,” in *Proceedings of the Fall 2001 Symposium on Assessing Online Instruction*, Naval Postgraduate School, Monterey, CA. <<http://oc1.nps.navy.mil/aqoi>>, 8 pages.

Sanchez, S. M. (1994), “On-line Analysis and Robust Design,” invited paper in *Proceedings of the 20th Annual NSF Conference on Design and Manufacturing Systems Research*, Society of Manufacturing Engineers: Boston, Massachusetts, 277-278.

Sanchez, S. M. (1993), “Issues in Automated Experimentation for Robust Product Design,” invited paper in *Proceedings of the 19th Annual NSF Conference on Design and Manufacturing Systems Research*, Society of Manufacturing Engineers: Charlotte, North Carolina, 1171-1175.

- **Other**

Sanchez, S. M. (2002). “OR Teachers: shall we practice what we preach?” *OR/MS Today*, August 2002.

Sanchez, S. M. (2000). “Internet teaching: interaction without inundation,” *Issues in Education* column in *OR/MS Today*, April 2000.

Sanchez, S. M. (1997). "Publish, Don't Perish!" Invited article in *OR/MS Tomorrow*, Spring 1997, Vol. 14 No. 1, 3–6.

Lawrence, E. C., L. D. Smith and S. M. Sanchez (1996), "Managing Credit Risk in a Changing Economy," *Bankers Magazine*, January/February issue, 58–63 (professional magazine).

UNDER REVIEW/WORK IN PROCESS

Baird, J. E., E. P. Paulo, S. M. Sanchez, and A. F. Crowder, "Measuring information gain in the objective force," under review.

Wolf, E. S., S. M. Sanchez, N. C. Goerger, and L. P. Brown, "Using agents to model logistics," under review.

Kleijnen, J. P. C., S. M. Sanchez, T. W. Lucas and T. M. Cioppa, "A user's guide to the brave new world of simulation experiments," under review.

Sanchez, S. M. and L. D. Smith, "Tolerance Design Revisited: Assessing the Impact of Correlated Noise Factors," in revision.

Sanchez, S. M. and K. Wood, "Bound, Enumerate, Screen and Test: The BEST algorithm for stochastic mixed-integer programs," working paper.

Sanchez, S. M., "Robust system selection: rethinking the meaning of 'best,'" working paper.

Crow, M. W., E. P. Paulo, and S. M. Sanchez, "Multiple sensor fusion and credit apportionment," working paper.

CONFERENCE PRESENTATIONS (without proceedings)

"Using Agent-based Models for Expeditionary Logistics" (with E. S. Wolf). INFORMS Annual Meeting, Atlanta, GA, October 19–22, 2003.

"Sleep Patterns and Fatigue Among U.S. Navy Sailors: Working the Night Shift During Combat Operations Aboard the USS STENNIS During *Operation Enduring Freedom*" (with N. L. Miller, J. L. Nguyen, J. L., and J. C. Miller). Presented at the Aerospace Medical Association 74th Annual Scientific Meeting, San Antonio, TX, May 2003.

"Timing of the major sleep period as fatigue countermeasure in U.S. Navy recruits" (with N. L. Miller, B. Baldus, H. Coard, L. Whitaker, and D. Redmond). Aerospace Medical Association 74th Annual Scientific Meeting, San Antonio, TX, May 2003.

"The BEST algorithm for solving stochastic integer programs" (with K. Wood). Presented at the Fall 2002 INFORMS meeting in San Jose, CA.

"Getting the most from your distillations" (with T. Lucas). Presented at the Fifth Project Albert International Workshop in Uberlingen, Germany, July 1-5 2002.

"Agent-based simulations: simple models, complex analyses" (with T. Lucas). Presented at the Fall 2001 INFORMS meeting in Miami, FL.

"Adaptive exploration of agent-based simulations" (with T. Lucas). Presented at the Fall 2001 INFORMS meeting in Miami, FL.

"Solving stochastic network interdiction with the BEST algorithm" (with K. Wood). Presented at a Mathematics Department Seminar, UC Davis, 5 October 2001, and AFOSR PI meeting in Minnowbrook, NY.

"Stochastic network interdiction" (with K. Wood). Presented at the Summer 2001 INFORMS meeting, Wailea, Hawaii.

“Adaptive exploration of command and control simulations” (with T. Lucas). Presented at the Spring 2001 4MAS Conference in Quantico, VA and the Summer 2001 INFORMS meeting in Wailea, Hawaii.

Discussant for “Spreadsheet models & Management Science Principles,” INFORM-ED sponsored session at the Fall 2000 INFORMS meeting, San Antonio, Texas.

“Beyond selection: why is this system best?” invited paper for a College on Simulation sponsored session, Fall 2000 INFORMS meeting, San Antonio, Texas.

“Robust system selection.” Presented at the Spring 2000 INFORMS meeting in Salt Lake City, Utah.

“Leveraging the Internet for Active Learning.” Invited workshop at the INFORM-ED sponsored *Teaching Effectiveness Colloquium II*, Spring 2000 INFORMS meeting in Salt Lake City, Utah.

“Effects of Internet Delivery on Learning Management Communication Skills,” with G. E. Hynes. Presented at the Fall 1999 *Association for Business Communication 64th Annual Convention*.

“Trials and Triumphs Teaching Team-Based Business Statistics,” Presented at the Spring 1999 INFORMS meeting in Cincinnati, Ohio.

“Selection for Rare Event Simulation Experiments,” sponsored session at the Spring 1999 INFORMS meeting in Cincinnati, Ohio.

“Active Learning in the Virtual Classroom.” Presented at the October 1998 International Conference on the Social Impact of Information Technologies in St. Louis, Missouri.

“Internet Course Design and Pedagogy” (with Don Kummer). Sponsored workshop at the AACSB 1998 Continuous Improvement Symposium in Dallas, Texas. (Audio tape available for purchase.)

“Robust Design Methods for Analyzing Simulation Experiments.” Invited presentation at the Spring 1998 INFORMS meeting in Tel Aviv, Israel.

“Models for Risk Management and Establishing Loss Reserves for Loans Secured by Residential Real Estate,” with L. D. Smith and E. C. Lawrence. Invited presentation at the Fall 1996 INFORMS meeting in Atlanta, GA.

“Effective Engineering Design Through Simulation,” with P. J. Sanchez. Invited tutorial presented at the October 1995 IFORS SPC-4 Conference on OR and Engineering Design in St. Louis, Missouri.

“Markovian Models and Robust Estimation Procedures for Residential Mortgage Portfolios,” with L. D. Smith and E. C. Lawrence. Presented at the October 1994 ORSA/TIMS meetings in Detroit, Michigan.

“Data Allocation and Robust System Identification for Discrete Event Simulation.” Presented at the August 1993 SIAM Conference on Simulation and Monte Carlo Methods in San Francisco, California.

“Robust JIT Systems: Insights and Examples, II” with F. Moeeni and A. J. Vakharia. Presented at the May 1993 TIMS/ORSA meetings in Chicago, Illinois.

“Robust JIT Systems: Insights and Examples,” with F. Moeeni. Presented at the November 1992 ORSA/TIMS meetings in San Francisco, California.

“Health Maintenance Organization Size and Failure,” with D. R. Wholey and J. B. Christianson. Presented at the June 1992 Group Health Institute in Minneapolis, Minnesota and the June 1992 AHSR Meetings in Chicago, Illinois.

“Implementing JIT in Uncertain Manufacturing Environments,” with F. Moeeni. Presented at the November 1991 ORSA/TIMS meetings in Anaheim, California.

“Competitive Market Structures: A Subset Selection Analysis,” with P. K. Kannan. Presented at the October 1990 ORSA/TIMS meetings in Philadelphia, PA and at the TIMS Marketing Science Conference (sponsored by Du Pont) in Wilmington, Delaware, March 1991.

“The Diffusion of HMOs: Density, Competitive, and Institutional Determinants of Entry,” with D. R. Wholey and J. B. Christianson. Presented at the June 1990 AHSR/FHSR meeting in Arlington, VA.

“A Selection Procedure for Traffic Hazard Analysis,” with J. L. Hagle. Presented at the October 1989 ORSA/TIMS meetings in New York City.

“Automated Design and Analysis of 2^k Factorial Experiments,” with P. J. Sanchez. Presented at the May 1989 CORS/TIMS/ORSA meetings in Vancouver, B.C.

“Acquiring Legitimacy: Information Dissemination by HMOs,” with D. R. Wholey and J. B. Christianson. Presented at the August 1988 Academy of Management meetings in Anaheim, California.

“Using Dynamic Models in Health Services Research: Community Correlates of HMO Foundings,” with D. R. Wholey and J. B. Christianson. Presented at the August 1988 Academy of Management meetings in Anaheim, California.

“Robustness of a Sequential Decision Model for Physician Diagnoses,” with W. R. Ferrell. Presented at the Spring 1987 TIMS/ORSA meetings in New Orleans, Louisiana.

“A New Bernoulli Selection Procedure.” Presented at the Fall 1986 ORSA/TIMS meetings in Miami, Florida.

PROFESSIONAL ACTIVITIES

Naval Research Logistics

- Deputy Editor, January 2002–June 2003.
- Guest Editor-In-Chief, December 2000–January 2002.
- Associate Editor, Statistics and Forecasting, January 1994–December 2000 .

INFORMS Journal on Computing

- Simulation Area Editor, January 2001–present.

Operations Research

- Associate Editor, Simulation Area, August 1994–December 2000.

NSF Review Panelist, Fall 1998.

Professional Society Memberships: INFORMS, Decision Sciences Institute, American Statistical Association, American Society for Quality.

PAIW-6: Project Albert International Workshop 6 (Invited workshop sponsored by the US Marine Corps Warfighting Laboratory)

- Local Organizing Committee

Winter Simulation Conferences

- Track Coordinator, Introductory Tutorials, 2003
- Track Coordinator, Business Process/Health Care/Service Industry track, 2000
- Session Chair, Input Modeling, 1998
- Session Chair, Simulation Selection Procedures, 1998
- Session Chair, Experimental Design, 1995, 1996

INFORMS (formerly Operations Research Society of America / The Institute of Management Sciences)

- President, INFORMS College on Simulation, 2002–2004.
- President, Forum on Women in OR/MS, 2003.
- Vice-President/President-Elect, Forum on Women in OR/MS, 2002.
- Member, Student Affairs Committee, 2002–2003.
- Chair, Combined Colloquia, 2002.
- Member, Education Committee, beginning 2001.
- Member, Bylaws, Policies and Procedures Committee, 2000-2001.
- Vice-President/President-Elect, INFORMS College on Simulation, 2000-2002.
- Secretary/Treasurer, INFORMS College on Simulation, 1998-2000.
- Chair, A Roundtable Discussion on Academic Centers for Applied OR/MS, INFORM-ED sponsored session, Fall 1999 INFORMS meeting, Philadelphia, Pennsylvania.
- Speaker, INFORMS Doctoral Colloquium, November 1996.
- Chair, ORSA Ad Hoc Committee on Women in Operations Research, 1993-1995.
- President, TIMS/ORSA Gateway Chapter of St. Louis, 1994-1995.
- Vice President/President Elect, TIMS/ORSA Gateway Chapter of St. Louis, 1993-1994.
- Member, INFORMS College on Simulation Committee on Underrepresented Minorities and Women, 1996, 1997.
- Chair, TIMS College on Simulation Committee on Underrepresented Minorities and Women, 1995.
- Member, TIMS College on Simulation Committee on Underrepresented Minorities and Women, 1994.
- Vice-chair, committee to reactivate TIMS/ORSA Gateway Chapter of St. Louis, 1993.
- Session Chair, Health Care Modeling, Spring 1987 TIMS/ORSA meetings, New Orleans, Louisiana.
- Session Chair, Business Applications of Statistics, Spring 1989 CORS/TIMS/ORSA meetings, Vancouver, British Columbia.

International Federation of Operational Research Societies

- Local Organizing Committee (Administration), OR and Engineering Design Specialty Conference, October 24–27, 1995.

Paper Referee

Management Science; Operations Research; European Journal of Operational Research; International Transactions on Operational Research; IIE Transactions; Simulation; Telecommunication Systems; Naval Research Logistics; IEEE Transactions on Systems, Man and Cybernetics; Proceedings of the Winter Simulation Conference; Communications in Statistics; NSF Engineering Design Conference Proceedings.

Book reviewer, Wadsworth Publishing Company.

TEACHING RESPONSIBILITIES

Naval Postgraduate School (graduate courses):

- OS3105: Statistics for Technical Management
- OS3000: Introduction to Management Science for ISO
- OA3102: Statistics
- OA4333: Advanced Simulation
- GB3041: Analytic Tools for Management Decisions

University of Missouri–St. Louis:

- Business Statistics II (undergrad)
- Business Forecasting (undergrad)
- Advanced Forecasting Models (undergrad independent study)
- An Analysis of Goodwill Industries (undergrad independent study, primary supervisor: R. J. Banis)
- Production and Operations Management: Manufacturing Strategy (undergrad/grad)
- Statistical Decision-Making (grad)
- Business Forecasting (grad)
- Statistical Decision-Making (grad, online)
- Management Science Elective (grad, online)
- Frontiers in Quality Management (professional, Mini-MBA program)

University of Arizona:

- Basic Operations Management (undergrad)
- Productivity Improvement (undergrad)
- Multivariate Statistics I: Linear Regression (grad)
- Multivariate Statistics II: Experimental Design (grad)
- Statistical Process Control (professional, co-instructor)

TEACHING MATERIALS

Developed a core course for the NPS MBA program (GB3041 at NPS), including an online module.

Developed a distributed learning course in operations research for surface warfare officers (OS3000 at NPS).

Developed course structure and web materials for an on-line version of MBA Management Science elective. (MSIS 494 at UMSL)

Developed and updated course structure and web materials for an on-line version of MBA statistics (MSIS 481 at UMSL).

Taught senior-level case-based course in P&OM, which emphasized team dynamics and presentation skills for strategic decision-making in a real world organization.

Overhead packets and cases for all senior and graduate level courses.

Developed and distributed freeware packages for students at the University of Arizona, for use in statistics and statistical process control.

TEACHING DEVELOPMENT ACTIVITIES

Attended full day *Teaching Excellence Workshop* offered by the Distributed Learning Resource Center at NPS.

Completed *IDL6543: Interactive Distributed Learning*, faculty development course offered by the Distributed Learning Resource Center at NPS.

Attended several short (1-3 hour) sessions relating to online instruction offered/coordinated by the Distributed Learning Resource Center at the Naval Postgraduate School.

Enrolled in *Creating Online Learning Environments*, course offered by CSU Monterey Bay, Winter 2001.

Attended *Teaching Effectiveness Colloquium* at the INFORMS meetings in Spring 1999, Spring 2000, and Fall 2001.

Attended *Experiential Learning Workshop V* and *Workshop VI*, Summer 1995 and 1996, at Cornell University in Ithaca, New York.

ADVISING

Doctoral Committee Chair:

- Farhad Moeeni, 1992, *A Taguchi Framework for Designing Robust Just-In-Time Systems with Kanban*. Ph.D. in Management, University of Arizona. Placement: tenure-track, Department of Marketing and Management, Arkansas State University

Doctoral Dissertation Committee Member:

- Thomas E. Cioppa, Lieutenant Colonel, U.S. Army, “Efficient Nearly Orthogonal and Space-filling Experimental Designs for High-dimensional Complex Models. Ph.D. in Operations Research, Naval Postgraduate School, September 2002. Advisor: Associate Professor Thomas Lucas, Department of Operations Research.
- David A. Parmenter, “The Operational Impact of Increased Component Part Commonality in a MRP System,” Ph.D. in Decision Sciences, University of Arizona, 1992.
- Hong Shik Park, “Reexamining the Relationship Between Demographic Similarity and Turnover: The Case of Top Management Groups,” Ph.D. in Management and Policy, University of Arizona, 1991.
- Alan R. Dennis, “Parallelism, Anonymity, Structure and Group Size in Electronic Meetings.” Ph.D. in Management Information Systems, University of Arizona, 1991.
- Heeseok Lee, “Data Allocation Design in Computer Networks,” Ph.D. in Decision Sciences, University of Arizona, 1991.
- George K. Easton, “Group Decision Support Systems Versus Face-to-face Communication for Collaborative Group Work: An Experimental Investigation,” Ph.D. in Management Information Systems, University of Arizona, 1988.
- Annette C. Easton, “An Experimental Investigation of Automated Versus Manual Support for Stakeholder Identification and Assumption Surfacing in Small Groups,” Ph.D. in Management Information Systems, University of Arizona, 1988.

Master’s:

- Timothy Allen, Lieutenant, U.S. Navy, “An Analysis of the Navigational Accuracy of the REMUS Autonomous Underwater Vehicle,” M.S. in Operations Research, expected June 2003. Advisor: Arnold H. Buss, Research Assistant Professor, MOVES Institute. Second Reader: Professor Susan Sanchez, Department of Operations Research.
- Rebecca Milton, Lieutenant Commander, U.S. Navy, “Using Agent-based Modeling to Examine the Logistical Chain of the Seabase,” M.S. in Operations Research, Naval Postgraduate School, expected March 2004. Advisor: Professor Susan Sanchez, Department of Operations Research. Second Reader: Major Lloyd Brown, TRADOC.
- Eric Wolf, Captain, U.S. Marine Corps, “Using Agent-based Distillations to Explore Logistics Support to Humanitarian Assistance/Disaster Relief Scenarios,” M.S. in Operations Research, Naval Postgraduate School, September 2003. Advisor: Professor Susan Sanchez, Department of Operations Research. Co-advisor: Dr. Niki Goerger, TRADOC. Second Reader: Major Lloyd Brown, TRADOC. (Winner, Best Paper in Composite Workgroup G, 71st MORS Symposium. Barchi Prize Nominee)
- Harvey Denison, Major, U.S. Army, “A Framework for Army Reserve Recruiting Analysis: Enlistment to Initial Training,” M.S. in Operations Research, Naval Postgraduate School expected June 2003. Advisor: Professor Susan Sanchez, Department of Operations Research. Second Reader: Senior Lecturer David Olwell, Department of Operations Research.
- Joseph A. Baird, Captain, U.S. Army, “Measuring Information Gain in the Objective Force,” M.S. in Operations Research, expected June 2003. Co-Advisors: LTC Eugene Paulo, Department of Operations Research and Alvin F. Crowder, TRADOC. Second Reader: Professor Susan Sanchez, Department of Operations Research. (MORS/Tisdale finalist)

- Hsin-Fu Wu, Lieutenant, U.S. Navy, “Factor Screening by Sonification in Frequency Domain Experiments,” M.S. in Operations Research, September 2002, Naval Postgraduate School (MORS-Tisdale semi-finalist). Co-advisors: Professor Susan Sanchez, Department of Operations Research and Associate Professor Russell Shilling, MOVES Institute. Second Reader: Paul Sanchez, Visiting Assistant Professor, Department of Operations Research. (MORS-Tisdale semi-finalist)
- John Nguyen, Lieutenant, U.S. Navy, “Effect of Night-inversion Schedule on Sleep and Fatigue for the USS Stennis,” M.S. in Operations Research, Naval Postgraduate School, September 2002 (MORS-Tisdale finalist). Advisor: Assistant Professor Nita Miller, Department of Operations Research. Second Readers: Associate Professor Samuel Buttrey, Department of Operations Research and Professor Susan Sanchez, Department of Operations Research. (MORS-Tisdale finalist)
- Mason Crow, Captain, U.S. Army, “Multiple Sensor Credit Apportionment: An Information Value Approach,” M.S. in Operations Research, Naval Postgraduate School, June 2002. Advisor: Assistant Professor Eugene Paulo, Department of Operations Research. Second Reader: Professor Susan Sanchez, Department of Operations Research.
- Theodore M. Perryman, Major, U.S. Army, “Applying Industrial Design Best Practices in the Development of Soldier Equipment,” M.S. in Systems Management, Naval Postgraduate School, March 2002. Advisor: Assistant Professor Nita Miller, Department of Operations Research. Associate Advisor: Professor Susan Sanchez, Department of Operations Research.

PROFESSIONAL COMMUNITY SERVICE

‘Gummy Bears in Space!’ one-hour statistics-in-action for Ross Elementary School second and fifth grades, fall 1998.

‘Math is Fun!’ one-hour program for Ross Elementary School first grade, spring 1998.

‘Expanding Your Horizons in Science and Mathematics,’ half-day program for 8th-10th grade girls interested in careers related to math and science

- Panelist, St. Louis Community College, Florissant Valley Campus, March 1996.
- Facilitator, Belleville Area Community College, May 1995.
- Panelist, UMSL campus, March 1995.

Participant in United Way’s Management Assistance Center coordination of program assessment and volunteer expertise, Spring 1995.

Panelist, Gateway Chapter Workshop for High School Mathematics Teachers, February 1994.

UNIVERSITY SERVICE

Naval Postgraduate School

- Operations Research Department
 - Simulation recruiting committee, Summer 2002–present.
 - Associate Chair for Instruction, April 2002–June 2003.
 - Curriculum Committee, January 2002–present.
 - ISO Curriculum Liaison, Fall 2000–present.
 - Faculty Council Representative (replacement), Spring-Summer 2002.
 - Judge, MORS/Tisdale Thesis Competition, Spring 2000 and Fall 2000.
- School of Operations and Information Sciences
 - Distributed Learning Council representative, 2001–present.
- Graduate School of Business and Public Policy

- Senior Faculty Council, Fall 2000–present.
- Thesis Award Committee, Fall 2001-2003.
- EMBA Review Committee, Spring 2002.
- Campus
 - Technology in the Classroom Committee, 2002.
 - Research Board Representative, Faculty Council, 2000-2003.
 - Speaker at the NPS Instructional Workshop, January 2001.

University of Missouri–St. Louis

- Campus
 - Master in Health Services program committee, chair, 1998–1999.
 - Intellectual Property Committee, member, 1997–1998.
 - Senate, 1995–2001.
 - Senate Committees:
 - * Computing Committee: chair 1995–1999, member 1994–1995.
 - * Executive Committee, 1995–1999.
 - * Ad Hoc Committee on Integrated Technology, 1995–1996.
 - * Ad Hoc Committee on the Assessment of Educational Outcomes, 1993–1994.
 - Moderator, Panel Discussion on “Successful Women in the Male Dominated Work Environment,” March, 1998. (Event sponsored by UMSL Office of Equal Opportunity.)
 - Referee, UM-System Research Board awards, Spring 1996, Spring 1997, Fall 1997 and Spring 1999.
 - High School Recruitment visitor, 1996.
 - Faculty Council, 1993–1995.
 - Campus Computing Committee, 1993–1994.
 - Graduate Council Rules and Regulations Committee, 1993–1994.
- School of Business Administration committees
 - Instruction Committee: chair, 1998-1999.
 - Research Task Force, Strategic Planning: co-chair, 1998.
 - Faculty Research and Development Committee: chair 1995–1997, member 1994–1995, 1997–1998.
 - Promotion and Tenure Guidelines Task Force: member, 1997–1998.
- School of Business Administration Seminar Series
 - Established and coordinated Thursday Roundtable, 1997–1998.
 - Friday Seminar Series coordinator (1996) and co-coordinator (Spring 1997).
- Webmaster, Logistics & Operations Management web pages, 1997-2000.

University of Arizona

- College of Business and Public Administration
 - Faculty Governance Committee, 1990-1992.
 - Graduate Professional Programs Committee, 1988-1992.
- Decision Sciences Group
 - Coordinator Search Committee, 1989-90.
 - Assorted administrative duties, 1989-90.
 - Decision Sciences Seminar organizer, 1988-90.
 - Doctoral program coordinator, 1986-90.

- Curriculum revision for Operations Management undergraduate and graduate programs, 1985-88.
- Assistant Director of the Doctoral Program, Management and Policy Department, 1985-86.

CONTRACT RESEARCH

- Grocery retail site selection study for a national discount grocery chain (with L. D. Smith), 1997–1998. Funded through the UMSL Center for Business and Industrial Studies.
- Customer retention study for a top ten financial institution, (with P. Sanchez), 1995–1996. Funded through the UMSL Center for Business and Industrial Studies.
- Forecasting credit expenses on home mortgage portfolios for a California financial institution (with L. D. Smith and E. C. Lawrence), 1993–1994. Funded through the UMSL Center for Business and Industrial Studies.
- Evaluation of nurse staffing and queueing for University Medical Center, Tucson, Arizona (with L. R. Burns and A. J. Vakharia), 1992.