

CURRICULUM VITAE

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EDUCATION

Ph.D. Industrial Engineering and Operations Research, The Pennsylvania State University, 2001
M.S. Industrial and Systems Engineering, Ohio University, 1997
B.S. Major: Industrial and Systems Engineering, *Summa Cum Laude*, Ohio University, 1995
Minor: Mathematics

POSITIONS HELD

7/2008-Present Associate Professor and Co-Director, Stochastic Modeling, Analysis, and Control (SMAC) Laboratory, Department of Industrial Engineering, University of Pittsburgh.

8/2007-6/2008 Associate Professor of Industrial Engineering, Department of Mechanical & Industrial Engineering, Northeastern University.

10/2005-7/2007 Associate Professor of Operations Research (with tenure), Department of Operational Sciences, Air Force Institute of Technology.

6/2001-9/2005 Assistant Professor of Operations Research, Department of Operational Sciences, Air Force Institute of Technology.

8/2000-12/2000 Teaching Assistant, Department of Industrial and Manufacturing Engineering, The Pennsylvania State University.

1/1999-5/1999 Teaching Assistant, Department of Industrial and Manufacturing Engineering, The Pennsylvania State University.

8/1998-12/1998 Research Assistant, Pennsylvania Transportation Institute, The Pennsylvania State University.

1/1997-6/1997 Instructor, Department of Industrial and Manufacturing Systems Engineering, Ohio University.

3/1996-6/1996 Graduate Assistant, Department of Industrial and Manufacturing Systems Engineering, Ohio University.

6/1995-8/1995 Research Assistant, Department of Industrial and Systems Engineering, Ohio University.

9/1991-8/1994 Engineering Co-op, Diamond Power Specialty Company, Lancaster, Ohio.
(Now Diamond Power International, Inc.)

PROFESSIONAL SOCIETIES AND HONORARIES

Senior Member, Institute of Industrial Engineers (IIE)
-- President, IIE Operations Research Division (2011-present)
-- President-Elect, IIE Operations Research Division (2010-2011)
-- Member, Quality Control and Reliability Engineering Division
Member, Institute for Operations Research and the Management Sciences (INFORMS)
-- Applied Probability Society (APS)
Member, Institute of Electrical and Electronics Engineers (IEEE)
Member, Military Operations Research Society (MORS)
Tau Beta Pi, National Engineering Honor Society
Phi Kappa Phi, National Honor Society
Omega Rho, International Operations Research Honor Society
Alpha Pi Mu, National Industrial Engineering Honor Society

HONORS AND AWARDS

- Best Paper Award in Operations Research Track, Industrial Engineering Research Conference, 2007
- Outstanding Young Chapter Member Award, Cincinnati/Dayton Chapter of INFORMS, 2006
- Nominated for a PECASE Award, Air Force Office of Scientific Research, 2006
- Nominated for the Barchi Prize, Military Operations Research Society, 2005
- Outstanding Alumnus Distinguished Lecturer, Department of Industrial & Manufacturing Engineering, The Pennsylvania State University, 2005
- INFORMS Young Researcher Roundtable, INFORMS Conference on OR Practice, 2005
- Instructor of the Quarter, Department of Operational Sciences, Winter 2005
- Dr. Leslie M. Norton Teaching Excellence Award, Air Force Institute of Technology, 2003.
- National Science Foundation (NSF) Engineering Education Scholars Program, 2000
- Weiss Dissertation Scholar, The Pennsylvania State University, 1999-2000
- Weiss Graduate Fellowship, The Pennsylvania State University, 1997-1998
- Stocker Engineering Fellowship, Ohio University, 1995-1997
- Ohio Board of Regents Fellow, Ohio University, 1995-1997
- E.R.H./Phi Delta Graduate Scholarship, Ohio University, 1996
- Dwight D. Gardner Scholarship, IIE, Ohio University, 1994-1995
- Phi Kappa Phi National Honor Society, Ohio University, 1994
- Top Junior in Industrial and Systems Engineering, Ohio University, 1994
- Fritz and Dolores Russ Scholarship, Ohio University, 1993-1994
- Charles H. and Evelyn Matthews Scholarship, Ohio University, 1993-1994
- Tau Beta Pi, National Engineering Honor Society, 1993
- Top Sophomore in Industrial and Systems Engineering, Ohio University, 1992
- Dean's Scholarship, Ohio University, 1991-1993

SCHOLARSHIP/RESEARCH

Refereed Journal Articles

1. Ulukus, M.Y., Kharoufeh, J.P. and L.M. Maillart (2012). Optimal replacement policies under environment-driven degradation. To appear in *Probability in the Engineering and Informational Sciences*.
2. Cordeiro, J.D. and J.P. Kharoufeh (2012). On the unreliable M/M/1 retrial queue in a random environment. To appear in *Stochastic Models*.
3. Perry, M.B., Kharoufeh, J.P., Shekhar, S., Cai, J. and M.R. Shankar (2012). Statistical characterization of nanostructured materials from severe plastic deformation in machining. To appear in *IIE Transactions*.

4. Kharoufeh, J.P., Cox, S.M. and M.E. Oxley (2012). Reliability of manufacturing equipment in complex environments. To appear in *Annals of Operations Research*.
5. ¹Sherman, N.P. and J.P. Kharoufeh (2011). Optimal Bernoulli routing in an unreliable M/G/1 retrial queue. *Probability in the Engineering and Informational Sciences*, 25 (1), 1-20.
6. Kharoufeh, J.P., Solo, C.J. and M.Y. Ulukus (2010). Semi-Markov models for degradation-based reliability. *IIE Transactions*, 42 (8), 599-612.
7. Kurt, M. and J.P. Kharoufeh (2010). Monotone optimal replacement policies for a Markovian deteriorating system in a controllable environment. *Operations Research Letters*, 38 (4), 273-279.
8. Kurt, M. and J.P. Kharoufeh (2010). Optimally maintaining a Markovian deteriorating system with limited imperfect repairs. *European Journal of Operational Research*, 205 (2), 368-380.
9. Flory, J.A. and J.P. Kharoufeh (2010). Optimal satellite payload selection and specification. *Military Operations Research*, 15 (3), 43-57.
10. Kharoufeh, J.P. and D. Mixon (2009). On a Markov-modulated shock and wear process. *Naval Research Logistics*, 56 (6), 563-576.
11. Sherman, N.P., Kharoufeh, J.P. and M.A. Abramson (2009). An M/G/1 retrial queue with unreliable server for streaming multimedia applications. *Probability in the Engineering and Informational Sciences*, 23 (2), 281-304.
12. ²Mann, C, Baldwin, R., Kharoufeh, J.P. and B.E. Mullins (2008). A queueing approach to optimal resource replication in wireless sensor networks. *Performance Evaluation*, 65 (10), 689-700.
13. Mann, C, Baldwin, R., Kharoufeh, J.P. and B.E. Mullins (2008). Energy-efficient agent replication for finite-lifetime resources in wireless sensor networks with time-constrained queries. *ACM SIGMOBILE: Mobile Computing and Communications Review*, 12 (2), 31-39.
14. Mann, C.R., Baldwin, R.O., Kharoufeh, J.P. and B.E. Mullins (2007). A trajectory-based selective broadcast query protocol for large-scale, high density wireless sensor networks. *Telecommunication Systems*, 35 (1-2), 67-86.
15. Offutt, E., Kharoufeh, J.P. and R.F. Deckro (2006). Distorted risk measures with application to military capability shortfalls. *Military Operations Research*, 11 (4), 25-39.
16. ³Sherman, N.P. and J.P. Kharoufeh (2006). An M/M/1 retrial queue with unreliable server. *Operations Research Letters*, 34 (6), 697-705.
17. Kharoufeh, J.P., Finkelstein, D. and D. Mixon (2006). Availability of periodically inspected systems subject to Markovian wear and shocks. *Journal of Applied Probability*, 43 (2), 303-317.
18. Peterson, B.S., Baldwin, R.O. and J.P. Kharoufeh (2006). Bluetooth inquiry time characterization and selection. *IEEE Transactions on Mobile Computing*, 5 (9), 1173-1187.
19. Flannery, A., Kharoufeh, J.P., Gautam, N. and L. Elefteriadou (2005). Queueing delay models for single-lane roundabouts. *Civil Engineering and Environmental Systems*, 22 (3), 133-150.
20. ⁴Kharoufeh, J.P. and S.M. Cox (2005). Stochastic models for degradation-based reliability. *IIE Transactions*, 37 (6), 533-542.

¹ This article ranked 1st among the "Top 10 Most-Read Articles" in *PEIS* from Jan-Mar 2011 and 4th from Apr 2010 – Apr 2011.

² This article ranked 3rd among the "Top 25 Hottest Articles" in *Performance Evaluation*, October-December 2008.

³ This article ranked 9th among the "Top 25 Hottest Articles" in *Operations Research Letters*, October-December 2006.

⁴ This article was featured in the June 2005 issue of *Industrial Engineer*, the professional publication of IIE.

21. Kharoufeh, J.P. and J.A. Sipe (2005). Evaluating failure time probabilities for a Markovian wear process. *Computers and Operations Research*, 32 (5), 1131-1145.
22. Kharoufeh, J.P. and N. Gautam (2004). A fluid queueing model for link travel time moments. *Naval Research Logistics*, 51 (2), 242-257.
23. Kharoufeh, J.P. and N. Gautam (2004). Deriving link travel time distributions via stochastic speed processes. *Transportation Science*, 38 (1), 97-106.
24. Sherman, N. and J.P. Kharoufeh (2004). Analytical modeling of joint reception, staging, onward movement, and integration. *Mathematical and Computer Modelling*, 39 (6-8), 799-815.
25. Kladitis, P., Bright, V. and J.P. Kharoufeh (2004). Uncertainty in manufacture and assembly of multiple-joint solder self-assembled microelectromechanical systems (MEMS). *Journal of Manufacturing Processes*, 6 (1), 32-50.
26. Kharoufeh, J.P. (2003). Explicit results for wear processes in a Markovian environment. *Operations Research Letters*, 31 (3), 237-244.
27. Peterson, B., Baldwin, R., Kharoufeh, J.P. and R. Raines (2003). Refinements to the packet error rate upper bound for Bluetooth networks. *IEEE Communications Letters*, 7 (8), 382-384.
28. Flietstra, T., Bauer, K. and J.P. Kharoufeh (2003). Integrated feature and architecture selection for radial basis neural networks. *Int'l Journal of Smart Engineering System Design*, 5, 507-516.
29. Kharoufeh, J.P. and K. Goulias (2002). Nonparametric identification of daily activity durations using kernel density estimators. *Transportation Research Part B: Methodological*, 36 (1), 59-82.
30. Kharoufeh, J.P. and M.J. Chandra (2002). Statistical tolerance analysis for non-normal or correlated normal component characteristics. *Int'l Journal of Production Research*, 40 (2), 337-352.

Submitted and Working Papers

1. Bian, L., Gebraeel, N. and J.P. Kharoufeh. Degradation modeling for real-time estimation of residual lifetimes in dynamic environments (Submitted.)
2. Degirmenci, G., Kharoufeh, J.P. and R.O. Baldwin. On the performance evaluation of query-based wireless sensor networks. (Submitted.)
3. Flory, J.A., Kharoufeh, J.P. and N. Gebraeel. A switching diffusion model for degradation modeling in stochastic and dynamic environments.
4. Flory, J.A. and J.P. Kharoufeh. Age- and state-dependent degradation in a random environment.
5. Dehghanian, A., Kharoufeh, J.P. and M. Modarres. Optimal jockeying among two parallel queues.
6. Kharoufeh, J.P. and E. Ozkan. Dynamic optimal control of multi-server retrial queues with unreliable servers.
7. Cordeiro, J.D. and J.P. Kharoufeh. Dynamic optimal control of the M/M/1 retrial queue in a random environment.
8. Cordeiro, J.D., Kharoufeh, J.P. and S. Chakravarthy. The unreliable M/G/1 retrial queue in a random environment.
9. Cordeiro, J.D. and J.P. Kharoufeh. On the ergodicity of level-dependent quasi-birth-and-death (LDQBD) processes.

Papers in Refereed Conference Proceedings

1. Flory, J.A. and J.P. Kharoufeh (2011). Estimating lifetime distributions in a random environment. In *Proceedings of the 2011 Industrial Engineering Research Conference*, Reno, NV, May 21-25, 2011.
2. Flory, J.A., Kharoufeh, J.P. and L.M. Maillart (2010). Optimal deployment of irreparable, multi-component systems. In *Proceedings of the 2010 Industrial Engineering Research Conference*, Cancun, Mexico, June 5-9, 2010. CD-ROM.
3. Ulukus, M.Y., Kharoufeh, J.P. and L.M. Maillart (2010). Optimal replacement of a system with Markov-modulated degradation. In *Proceedings of the 2010 Industrial Engineering Research Conference*, Cancun, Mexico, June 5-9, 2010. CD-ROM.
4. Booher, T.B. and J.P. Kharoufeh (2008). Optimal periodic inspection of complex degrading systems. In *Proceedings of the 2008 Industrial Engineering Research Conference*, Vancouver, BC, Canada, May 17-21, 2008, pp. 87-92.
5. ¹Cordeiro, J.D. and J.P. Kharoufeh (2007). Analysis of an unreliable retrial queue in a random environment. In *Proceedings of the 2007 Industrial Engineering Research Conference*, Nashville, TN, May 19-23, 2007, pp. 1328-1333.
6. Crawford, B. and J.P. Kharoufeh (2007). Approximate analysis of an unreliable multiserver retrial queue. In *Proceedings of the 2007 Industrial Engineering Research Conference*, Nashville, TN, May 19-23, 2007, pp. 1746-1751.
7. Kharoufeh, J.P. and N.P. Sherman (2006). Performance analysis and control of an unreliable $M/G/1$ retrial queue. In *Proceedings of the 2006 Industrial Engineering Research Conference*, Orlando, FL, May 20-24, 2006. CD-ROM.
8. Peterson, B., Baldwin, R. and J.P. Kharoufeh (2004). A specification-compatible Bluetooth inquiry simplification. In *Proceedings of the 37th Hawaii International Conference on System Sciences (HICSS)*, Waikaloa, Hawaii, January 5-8, 2004, pp. 307-315. (Published by the IEEE Computer Society.)
9. Flietstra, T., Bauer, K. and J.P. Kharoufeh (2002). Feature and architecture selection for radial basis neural networks. In *Proceedings of the Artificial Neural Networks in Engineering Conference: Smart Engineering System Design*, November 10-13, 2002, pp. 123-128.
10. Flannery, A., Kharoufeh, J.P., Gautam, N. and L. Elefteriadou (2000). Estimating delay at roundabouts. In *Proceedings of the 70th Annual Meeting of the Institute of Transportation Engineers*, Nashville, Tennessee, August 6-9, 2000.
11. Bush, B.O., Kharoufeh, J.P. and L. Rabelo (1996) Development of an evolutionary scheme for adaptive fuzzy design. In *Proceedings of the Adaptive Distributed Parallel Computing Symposium*, Dayton, OH, August 8-9, 1996.

Papers in Non-Refereed Conference Proceedings

1. Kharoufeh, J.P., Maillart, L.M. and N. Gebraeel (2011). Adaptive maintenance planning based on evolving residual life distributions. In *Proceedings of 2011 NSF Engineering Research and Innovation Conference*, Atlanta, GA, January 4-7, 2011.

Books and Edited Books

1. Cochran, J., Cox, L.A., Keskinocak, P., Kharoufeh, J.P. and Smith, J.C. (Eds.) (2011). *Wiley Encyclopedia of Operations Research and Management Science*. John Wiley & Sons, New York, NY.

¹ Best Paper Award: Operations Research Track.

Chapters in Books or Edited Books

1. Bountourelis, T., Ulukus, M.Y., Kharoufeh, J.P. and S.G. Nabors. The modeling, analysis and management of intensive care units. Under review. *Healthcare Operations Management*, B. Denton (Editor), Springer Publishers.
2. Kharoufeh, J.P. The M/G/s/s queue (2011). In *Wiley Encyclopedia of Operations Research and Management Science*, J. Cochran, L.A. Cox, P. Keskinocak, J.P. Kharoufeh, J.C. Smith (Eds.), New York, NY.
3. Kharoufeh, J.P. Level-dependent quasi-birth-and-death processes (2011). In *Wiley Encyclopedia of Operations Research and Management Science*, J. Cochran, L.A. Cox, P. Keskinocak, J.P. Kharoufeh, J.C. Smith (Eds.), New York, NY.
4. Cordeiro, J.D. and J.P. Kharoufeh (2011). Batch Markovian arrival processes (BMAP). In *Wiley Encyclopedia of Operations Research and Management Science*, J. Cochran, L.A. Cox, P. Keskinocak, J.P. Kharoufeh, J.C. Smith (Eds.), New York, NY.

Invited Presentations (Seminars and Conferences)

1. Degirmenci, G., Kharoufeh, J.P. and O.A. Prokopyev (2012). Optimal operating strategies for lifetime maximization of query-based wireless sensor networks. *Industrial and Systems Engineering Research Conference*, Orlando, FL, May 19-23, 2012 (scheduled).
2. Kurt, M., Kharoufeh, J.P. and L.M. Maillart (2012). Optimally provisioning spares and repair capacity for a vital deteriorating component. *Industrial and Systems Engineering Research Conference*, Orlando, FL, May 19-23, 2012 (scheduled).
3. Flory, J.A. and J.P. Kharoufeh (2011). Maximum likelihood estimation of component lifetime distributions in a random environment. *INFORMS Annual Meeting*, Charlotte, NC, November 13-16, 2011.
4. Degirmenci, G., Kharoufeh, J.P., and O.A. Prokopyev (2011). Dynamic resource replication and transmission range setting in query-based wireless sensor networks. *INFORMS Annual Meeting*, Charlotte, NC, November 13-16, 2011.
5. Perry, M.B. and J.P. Kharoufeh (2011). Designed experiments for characterizing nanostructured surfaces created by machining processes. *INFORMS Annual Meeting*, Charlotte, NC, November 13-16, 2011.
6. Ulukus, M.Y., Kharoufeh, J.P. and L.M. Maillart (2011). Structured replacement policies for a system subject to Markov-modulated degradation. *Industrial Engineering Research Conference*, Reno, NV, May 21-25, 2011.
7. Flory, J.A. and J.P. Kharoufeh (2011). Estimating lifetime distributions in a random environment. *Industrial Engineering Research Conference*, Reno, NV, May 21-25, 2011.
8. Bountourelis, T., Luangkesorn, L., Nabors, S. and J.P. Kharoufeh (2011). Statistical analysis and modeling of intensive care units. *Industrial Engineering Research Conference*, Reno, NV, May 21-25, 2011.
9. Kharoufeh, J.P. (2011). Asymptotic approximations for a cumulative degradation process. Invited Seminar, Department of Mathematics and Statistics, Air Force Institute of Technology, April 7, 2011.
10. Kharoufeh, J.P. (2011). A mathematical framework for reliability assessment in randomly-varying environments. Invited Seminar, Department of Industrial and Systems Engineering, Georgia Institute of Technology, March 11, 2011.

11. Kharoufeh, J.P., Maillart, L.M. and N. Gebraeel (2011). Adaptive maintenance planning based on evolving residual life distributions. *2011 NSF Engineering Research and Innovation Conference*, Atlanta, GA, January 4-7, 2011. (Poster session.)
12. Degirmenci, G. and J.P. Kharoufeh (2010). Optimizing resource replication in wireless sensor networks with non-uniform topologies. *INFORMS Annual Meeting*, Austin, TX, November 7-10, 2010.
13. Flory, J.A. and J.P. Kharoufeh (2010). Estimating a stochastic operating environment via degradation observations. *INFORMS Annual Meeting*, Austin, TX, November 7-10, 2010.
14. Ulukus, M.Y., Kharoufeh, J.P. and L.M. Maillart (2010). Optimal replacement of a system with Markov-modulated degradation. *INFORMS Annual Meeting*, Austin, TX, November 7-10, 2010.
15. Keskin, B., Kharoufeh, J.P. and S. Melouk (2010). Analysis of a production-inventory system with unreliable supplier. *INFORMS Annual Meeting*, Austin, TX, November 7-10, 2010.
16. Flory, J.A., Kharoufeh, J.P. and L.M. Maillart (2010). Optimal deployment of irreparable, multi-component systems. *Industrial Engineering Research Conference*, Cancun, Mexico, June 5-9, 2010.
17. Ulukus, M.Y., Kharoufeh, J.P. and L.M. Maillart (2010). Optimal replacement of a system with Markov-modulated degradation. *Industrial Engineering Research Conference*, Cancun, Mexico, June 5-9, 2010.
18. Kharoufeh, J.P. (2010). Some results for unreliable queueing systems with retrials. Invited Seminar, Department of Industrial and Systems Engineering, Rutgers University, March 30, 2010.
19. Degirmenci, G. and J.P. Kharoufeh (2009). Optimal resource replication in query-based wireless sensor networks. *INFORMS Annual Meeting*, San Diego, CA, October 11-14, 2009.
20. Degirmenci, G. and J.P. Kharoufeh (2009). Queueing models for optimal resource replication in wireless sensor networks. *Industrial Engineering Research Conference*, Miami, FL, May 30-June 3, 2009.
21. Khojandi, A., Kharoufeh, J.P., and L.M. Maillart (2009). Control of a retrial queueing system with unreliable, heterogeneous servers. *Industrial Engineering Research Conference*, Miami, FL, May 30-June 3, 2009.
22. Sherman, N.P. and J.P. Kharoufeh (2009). Optimal Bernoulli routing in an unreliable M/G/1 retrial queue. *Industrial Engineering Research Conference*, Miami, FL, May 30-June 3, 2009.
23. Cordeiro, J.D. and J.P. Kharoufeh (2009). Optimal rate selection for an unreliable retrial queue in a random environment. *Industrial Engineering Research Conference*, Miami, FL, May 30-June 3, 2009.
24. Kharoufeh, J.P. (2009). Unreliable retrial queues in a random environment. Invited Seminar, Operations Research Colloquium, Pennsylvania State University, March 24, 2009.
25. Kharoufeh, J.P. (2008) Unreliable retrial queues with time-varying parameters. Invited Seminar, Department of Operations Management, Statistics and Management Science, University of Alabama, December 5, 2008.
26. Kharoufeh, J.P. (2008). Some limit theorems for a cumulative degradation process. *INFORMS Annual Meeting*, Washington, D.C., October 12-15, 2008.
27. Kharoufeh, J.P. and T.B. Boohar (2008). Optimal periodic inspection of complex degrading systems. *Industrial Engineering Research Conference*, Vancouver, BC, May 17-21, 2008.
28. Cordeiro, J.D. and J.P. Kharoufeh (2008). Stability of an unreliable M/G/1 retrial queue with time-varying parameters. *Industrial Engineering Research Conference*, Vancouver, BC, May 17-21, 2008.

29. Kharoufeh, J.P. (2008). Unreliable retrial queues with time-varying parameters. Invited Seminar, Department of Industrial Engineering, University of Pittsburgh, January 18, 2008.
30. Kharoufeh, J.P. (2008). Unreliable retrial queueing systems in time-varying environments. Air Force Office of Scientific Research, Optimization and Discrete Mathematics Program Review, Arlington, VA, April 21-23, 2008.
31. Kharoufeh, J.P., Mann, C.R. and R.O. Baldwin (2007), A selective broadcast query protocol for high-density wireless sensor networks. *INFORMS Annual Meeting*, Seattle, WA, November 4-7, 2007.
32. Cordeiro, J.D. and J.P. Kharoufeh (2007). Analysis of an unreliable retrial queue in a random environment. *Industrial Engineering Research Conference*, Nashville, TN, May 19-23, 2007.
33. Crawford, B. and J.P. Kharoufeh (2007). Approximate analysis of an unreliable multiserver retrial queue. *Industrial Engineering Research Conference*, Nashville, TN, May 19-23, 2007.
34. Kharoufeh, J.P. (2007), A stochastic service system with disruptions and retrials. Invited Seminar, Department of Decision Sciences, Drexel University, January 26, 2007.
35. Kharoufeh, J.P. (2007), A mathematical framework for condition-based reliability. Invited Seminar, Department of Mechanical and Industrial Engineering, Northeastern University, January 12, 2007.
36. Kharoufeh, J.P. (2007). Analysis and optimal control of unreliable retrial queueing systems. Air Force Office of Scientific Research, Optimization and Discrete Mathematics Program Review, Arlington, VA, May 7-9, 2007.
37. Kharoufeh, J.P. (2006), Maximizing the availability of a periodically inspected system with hidden failures. Invited Seminar, Cincinnati-Dayton Chapter of INFORMS Business Meeting held at Wright State University, November 16, 2006.
38. Kharoufeh, J.P. (2006), Degradation-based prognostics via phase-type approximations. *INFORMS Annual Meeting*, Pittsburgh, PA, November 5-8, 2006.
39. Kharoufeh, J.P. (2006), Maximizing the availability of a periodically inspected system with hidden failures. Invited Seminar, Department of Mechanical and Industrial Engineering, University of Iowa, October 19, 2006.
40. ¹Flory, J.A. and J.P. Kharoufeh (2006), Satellite payloads for inclusion on a satellite bus. *Air Force Operations Research Symposium*, Albuquerque, NM, October 17-20, 2006.
41. Kharoufeh, J.P. and N.P. Sherman (2006), Performance analysis and control of an unreliable M/G/1 retrial queue. *Industrial Engineering Research Conference*, Orlando, FL, May 20-24, 2006.
42. Kharoufeh, J.P. (2006), Some limit theorems for a cumulative degradation process. Invited Seminar, Department of Mathematics and Statistics, Wright State University, May 5, 2006.
43. Kharoufeh, J.P. (2006), Optimal periodic inspection of a system subject to wear and shock degradation. Invited Seminar, Department of Systems and Information Engineering, University of Virginia, Charlottesville, VA, February 10, 2006.
44. Kharoufeh, J.P. and M. Abramson (2005), Optimal periodic inspection of a system subject to wear and shock degradation. *INFORMS Annual Meeting*, San Francisco, CA, November 13-16, 2005.
45. Kharoufeh, J.P. (2005) Availability of periodically inspected systems subject to Markovian wear and shocks. Invited Seminar, *Distinguished Lecture Series*, Department of Industrial and Manufacturing Engineering, The Pennsylvania State University, University Park, PA, April 7, 2005.

¹ Best Presentation in Working Group: Space Topics.

46. Finkelstein, D. and J.P. Kharoufeh (2004), Availability of inspected systems subject to environmental wear and shocks. *INFORMS Annual Meeting*, Denver, CO, October 23-27, 2004.
47. Cox, S.M. and J.P. Kharoufeh (2003) Markov reward models for lifetime estimation in prognostics. *INFORMS Annual Meeting*, Atlanta, GA, October 19-22, 2003.
48. Cox, S.M. and J.P. Kharoufeh (2002) Stochastic models for aircraft prognostics. *INFORMS Annual Meeting*, San Jose, CA, November 17-20, 2002.
49. Flietstra, T., Bauer, K. and J.P. Kharoufeh (2002). Feature and architecture selection for radial basis neural networks. *Artificial Neural Networks in Engineering Conference: Smart Engineering System Design*, November 10-13, 2002.
50. Kharoufeh, J.P. (2001) Stochastic analysis of link travel times in transportation networks. *INFORMS Annual Meeting*, Miami Beach, FL, November 4-7, 2001.
51. Kharoufeh, J.P. and N. Gautam (2000) Travel time distribution for a vehicle with state-dependent velocity. *INFORMS Annual Meeting*, San Antonio, TX, November 5-8, 2000.
52. Kharoufeh, J.P. (2000) Stochastic analysis of link travel time distributions. Invited Seminar, Department of Operational Sciences, Air Force Institute of Technology, Dayton, OH, August 2000.
53. Kharoufeh, J.P. (2000) An analysis of vehicle travel times via a modified queueing network approach. Invited Seminar, Department of Engineering Management, Old Dominion University, Norfolk, VA, April 2000.
54. Kharoufeh, J.P. (2000) An analysis of vehicle travel times via a modified queueing network approach. Invited Seminar, Department of Industrial and Systems Engineering, Virginia Polytechnic Institute and State University, Blacksburg, VA, March 2000.
55. Kharoufeh, J.P. (2000) Performance analysis of freeway systems using a modified queueing network approach. Invited Seminar, Systems and Industrial Engineering Department, University of Arizona, Tucson, AZ, February 14, 2000.
56. Kharoufeh, J.P. and K.G. Goulias (1998) Longitudinal and cross-sectional kernel density-based nonparametric identification of daily activity and travel patterns. Invited Seminar, University of Toronto, Toronto, Ontario, August 1998.

Contributed Conference Presentations

1. Degirmenci, G and J.P. Kharoufeh (2011). Analysis and optimal operation of query-based wireless sensor networks. *Industrial Engineering Research Conference*, Reno, NV, May 21-25, 2011.
2. Perry, M.B., Shekhar, S., Cai, J., Shankar, M.R. and J.P. Kharoufeh (2010). Statistical characterization of nanostructured surfaces created by machining processes. *INFORMS Annual Meeting*, Austin, TX, November 7-10, 2010.
3. Khojandi, A. and J.P. Kharoufeh (2009). Optimal control of an unreliable multiserver retrial queue. *INFORMS Annual Meeting*, San Diego, CA, October 11-14, 2009.
4. Sherman, N.P. and J.P. Kharoufeh (2005), An infinite-capacity retrial queue with unreliable server. *INFORMS Annual Meeting*, San Francisco, CA, November 13-16, 2005.
5. Offutt, E., Kharoufeh, J.P. and R.F. Deckro (2005), Distorted risk measures with application to military capability shortfalls. *73rd Military Operations Research Society Symposium*, United States Military Academy, West Point, NY, June 21-23, 2005.

6. Plourde, J. and J.P. Kharoufeh (2005), Time-adaptive sampling of a chemical hazard area. *73rd Military Operations Research Society Symposium*, United States Military Academy, West Point, NY, June 21-23, 2005.
7. Solo, C. and J.P. Kharoufeh (2005), Phase-type approximations for wear processes in a semi-Markov environment. *73rd Military Operations Research Society Symposium*, United States Military Academy, West Point, NY, June 21-23, 2005.
8. Woodward, W.E., Deckro, R.F., Kharoufeh, J.P., and S.P. Chambal (2004). Modeling and measuring military capability risk. *CORS/INFORMS Joint International Meeting*, Banff, Alberta, Canada, May 16-19, 2004.
9. Peterson, B., Baldwin, R. and J.P. Kharoufeh (2004). A specification-compatible Bluetooth inquiry simplification. *37th Hawaii International Conference on System Sciences (HICSS)*, Waikaloa, Hawaii, January 5-8, 2004.
10. Lacksonen, T.A. and J.P. Kharoufeh (1996) Optimal material flow through groups of machines. *INFORMS Annual Meeting*, Atlanta, GA, November 3-6, 1996.
11. Bush, B.O., Kharoufeh, J.P. and L. Rabelo (1996) Development of an evolutionary scheme for adaptive fuzzy design. *Adaptive Distributed Parallel Computing Symposium*, Dayton, OH, August 8-9, 1996.

RESEARCH GRANTS AND CONTRACTS

Collaborative Research: Adaptive Maintenance Planning Based on Evolving Residual Life Distributions

Sponsor: National Science Foundation, CMMI-MES (CMMI-0856702)

Dates: September 2009-August 2012

Amount: \$499,200

J.P. Kharoufeh (PI) and L.M. Maillart (co-PI); N. Gebraeel (PI at Georgia Tech)

Veterans Engineering Resource Center

Sponsor: U.S. Department of Veterans Affairs

Division: Health for Operations and Management

Dates: July 2009 – September 2011

Amount: \$1,800,000

A. Schaefer (PI); J. Rajgopal (co-PI)

J. Kharoufeh, L. Maillart, O. Prokopyev (co-Investigators)

Collaborative Research:

A Mathematical Framework for the Performance Evaluation of Large-Scale Sensor Networks

Sponsor: National Science Foundation, CISE-CNS (CNS-0831707)

Dates: September 2008-August 2011

Amount: \$411,994

J.P. Kharoufeh (PI: \$299,994+\$12,000 REU); R.O. Baldwin (co-PI: \$100,000)

Analysis and Optimal Control of Unreliable Retrieval Queueing Systems

Sponsor: Air Force Office of Scientific Research (F1ATA06034J001 and FA9550-08-1-0004)

Division: Mathematics, Information, and Life Sciences (Optimization and Discrete Mathematics)

Date: January 2006-June 2008

Amount: \$245,312

J.P. Kharoufeh (PI)

Optimizing Mean Mission Duration Specification for Multiple-Payload Satellites

Sponsor: U.S. Department of Defense (Organization classified) (F448528)

Date: July 2005-September 2006

Amount: \$57,372

J.P. Kharoufeh (PI)

Degradation-Based Lifetime Modeling

Sponsor: U.S. Department of Defense (Organization classified) (E448444)

Date: July 2004-September 2005

Amount: \$65,497

J.P. Kharoufeh (PI)

Optimal Sampling of a Chemical Hazard Area

Sponsor: Air Force Research Laboratory (NGWSHE00472511)

Division: Chemical-Biological Defense Programs

Date: July 2004-September 2005

Amount: \$59,377

J.P. Kharoufeh (PI)

Remaining Lifetime Prognosis via Stochastic Degradation Models

Sponsor: Air Force Office of Scientific Research (FQ8671-04-0-0359)

Division: Mathematical Sciences (Optimization and Discrete Mathematics)

Date: January 2004-December 2004

Amount: \$120,494

J.P. Kharoufeh (PI)

Mathematical Models for Aircraft Diagnostics/Prognostics

Sponsor: Air Force Office of Scientific Research (FQ8671-02-0-0542)

Division: Mathematical Sciences (Optimization and Discrete Mathematics)

Date: January 2002-December 2002

Amount: \$105,608

Kenneth Bauer, Jr. (PI); J.P. Kharoufeh (co-PI)

Stochastic Model for Joint Reception, Staging, Onward Movement, & Integration

Sponsor: United States Transportation Command

Date: April 2002-March 2003

Amount: \$18,283

J.P. Kharoufeh (PI)

Modeling & Analysis of Link & Path Travel Times in Stochastic and Dynamic Transportation Networks

Sponsor: AFIT Cooperative Research and Development Agreement Salary Funds

Date: October 2001-October 2002

Amount: \$20,000

J.P. Kharoufeh (PI)

TEACHING AND ADVISING

Courses Taught (U = Undergraduate, G = Graduate)

Courses at University of Pittsburgh

- (G) IE 2072: Probability (Fa 08, Fa 09, Fa 10, Fa 11)
- (G) IE 2084: Stochastic Processes (Sp 09, Sp 10, Sp 11, Sp 12)
- (G) IE 3085: Queueing Theory (Sp 09, Fa 10)
- (G) IE 3998: Ph.D. Independent Study (Sp 10, Sp 12)
- (U) ENGR 0020: Probability & Statistics for Engineers I (Fa 11)

Courses at Northeastern University

- (U) MIM U515: Operations Research (Fa 07)
- (G) IEM G230: Probabilistic Operations Research (Sp 08)

Courses at Air Force Institute of Technology, Graduate School of Engineering & Management

- (G) OPER 540: Stochastic Modeling and Analysis I (Wi 02,03,04,05,06,07)
- (G) OPER 601: Operations Research Seminar (Sp 04,05,06,07)
- (G) OPER 641: Stochastic Modeling and Analysis II (Su 01,02; Sp 03,04,05,06,07)
- (G) OPER 647: Queueing System Analysis (Fa 01; Su 02; Fa 03,04,05,06)
- (G) OPER 741: Advanced Stochastic Modeling (Fa 05)
- (G) OPER 747: Queueing Networks (Fa 02)
- (G) OPER 699: Special Studies (Topics in Queueing Theory) (Wi 02)
- (G) OPER 699: Special Studies (Topics in Stochastic Modeling) (Sp 05)
- (G) OPER 899: Special Studies (Markov Decision Processes) (Sp 04; Su 04)
- (G) OPER 899: Special Studies (Topics in Mathematical Reliability) (Fa 05)

Courses at The Pennsylvania State University

- (U) IE 424: Process Quality Engineering, (Fa 00, assisted)
- (U) IE 425: Operations Research (Sp 99, assisted)

Courses at Ohio University

- (U) ISE 304: Applied Engineering Statistics (Wi 97, Sp 97)
- (U) ISE 305: Engineering Statistics I, Probability (Sp 96, assisted)
- (U) ISE 306: Engineering Statistics II (Sp 96, assisted)

Graduate Student Advising

Current Ph.D. Students (University of Pittsburgh)

1. Degirmenci, Guvenc. *Performance Analysis and Optimization of Query-Based Wireless Sensor Networks*. Expected graduation, Summer 2012. Sponsor: National Science Foundation.
2. Flory, John A. *Hybrid Techniques for Reliability Assessment in Randomly-Varying Environments*. Expected graduation, Summer 2013. Sponsor: National Science Foundation, Post 9/11 GI Bill.
3. Ozkan, Erhun. Dissertation title TBD. Expected graduation, Spring 2014.
4. Parlak, Ayse. Dissertation title TBD. Expected graduation, Spring 2015.

Ph.D. Dissertations Supervised

1. Cordeiro, Maj James (Ph.D., Operations Research, AFIT), *Unreliable Retrieval Queues in a Random Environment*. September 2007. Sponsor: Air Force Office of Scientific Research.
2. Sherman, Capt Nathan (Ph.D., Operations Research, AFIT), *Analysis and Control of Unreliable, Single-Server Retrieval Queues with Infinite-Capacity Orbit and Normal Queue*. June 2006. Sponsor: Air Force Office of Scientific Research.
3. Cox, Maj Steven (Ph.D., Operations Research, AFIT), *Hybrid Stochastic Models for Remaining Lifetime Prognosis*. September 2004. Sponsor: Air Force Office of Scientific Research.

M.S. Theses Supervised

1. Crawford, Capt B. (M.S., Operations Research, AFIT). *Approximate Analysis of an Unreliable M/M/2 Retrieval Queue*. March 2007. Sponsor: Air Force Office of Scientific Research.
2. Kallemyn, Capt B. (M.S., Operations Research, AFIT). *Prioritizing Satellite Payload Selection via Optimization*. March 2007. Sponsor: U.S. Department of Defense.

3. Booher, Capt T. (M.S., Operations Research, AFIT), *Optimal Periodic Inspection of a Stochastically Degrading System*. March 2006.
4. Flory, Capt J. (M.S., Operations Research, AFIT), *Optimizing Mean Mission Duration for Multiple-Payload Satellites*. March 2006. Sponsor: U.S. Department of Defense.
5. Cook, 1 Lt T. (M.S., Operations Research, AFIT), *Optimal Maintenance for Stochastically Degrading Satellite Constellations*, March 2005. Sponsor: U.S. Department of Defense.
6. Gulyas, 1 Lt C. (M.S., Operations Research, AFIT), *Stochastic Capability Models for Satellite Constellations*, March 2005. Sponsor: U.S. Department of Defense.
7. Offutt, Maj E. (M.S., Operations Research, AFIT), *Selection and Application of Distorted Risk Measures*, March 2005.
8. Plourde, 2 Lt J. (M.S., Operations Research, AFIT), *Optimal Sampling of a Chemical Hazard Area*, March 2005. Sponsor: Air Force Research Laboratory, Chemical-Biological Defense Programs.
9. Chapin, 2 Lt P. (M.S., Operations Research, AFIT), *Age Replacement and Service Rate Control of Stochastically Degrading Queues*, March 2004.
10. ¹Finkelstein, Capt D. (M.S., Applied Mathematics, AFIT), *Analytical Results for Single-Unit Systems Subject to Markovian Wear and Shocks*, March 2004.
11. Solo, Capt C. (M.S., Operations Research, AFIT), *Phase-Type Approximations for Wear Processes in a Semi-Markov Environment*, March 2004.
12. Cho, Capt J. (M.S., Systems Engineering, AFIT), *Shortest Path Problems in a Stochastic and Dynamic Environment*, March 2003.
13. Hendrixson, 1 Lt J. (M.S., Operations Research, AFIT), *Analysis of Scheduling Policies for a M/G/1 Queue with Rework*, March 2003.
14. ²Sherman, Capt N. (M.S., Operations Research, AFIT), *A Stochastic Model for Joint Reception, Staging, Onward Movement, and Integration (JRSOI)*, March 2003. Sponsor: United States Transportation Command.
15. Sipe, 2 Lt J. (M.S., Applied Mathematics, AFIT), *Transient Analysis and Applications of Markov Reward Processes*, March 2003.
16. Sumter, Capt B. (M.S., Operations Research, AFIT), *Optimal Replacement Policies for Satellite Constellations*, March 2003. Sponsor: Air Force Space Command, Space Analysis Center.
17. Yager, 1 Lt N. (M.S., Operations Research, AFIT), *Models for Sortie Generation with Autonomic Logistics Capabilities*, March 2003.

Membership on Ph.D. and M.S. Committees

1. Koppenhaver, Robert (Ph.D., Industrial Engineering, University of Pittsburgh), *HIV Treatment in Resource-Limited Environments: An Approximate Dynamic Programming Approach*. In progress. Advisor: Dr. Andrew Schaefer.
2. Icten, Zeynep Gozde (Ph.D., Industrial Engineering, University of Pittsburgh). *Markov Decision Process Models for Improving Equity in Liver Allocation*. December 2011. Advisor: Dr. Lisa Maillart.

¹ *Most Exceptional M.S. Thesis in Applied Mathematics*, Graduate School of Engineering and Management, AFIT.

² *Most Exceptional M.S. Thesis in Operational Sciences*, Graduate School of Engineering and Management, AFIT.

3. Claypool, Erin (Ph.D., Industrial Engineering, University of Pittsburgh), *Assessing and Mitigating Risk in a Design for Supply Chain Problem*. May 2011. Advisors: Drs. Bryan Norman and Kim Needy.
4. Shenoy, Rashmi (M.S., Industrial Engineering, Northeastern University), *Misuse and Performance of Individuals Charts in Statistical Process Control for Single Parameter Distributions of Unknown Stability*. May 2008. Advisor: Dr. James Benneyan.
5. Mann, Maj Christopher (Ph.D., Electrical Engineering, AFIT), *Energy-Efficient Querying of Wireless Sensor Networks*. September 2007. Advisor: Dr. Rusty Baldwin.
6. Flint, Mr. Matthew (Ph.D., Electrical Engineering, University of Cincinnati), *Cooperative Unmanned Aerial Vehicle (UAV) Search in Dynamic Environments Using Stochastic Methods*. June 2005. Advisor: Dr. Emmanuel Fernandez.
7. Decker, Maj Douglas (Ph.D., Aerospace Engineering, AFIT), *Decision Factors for Cooperative Multiple Warhead UAV Target Classification and Attack with Control Applications*. March 2005. Advisor: Dr. David Jacques.
8. Peterson, Maj Brian (Ph.D., Electrical Engineering, AFIT), *Device Discovery in Frequency Hopping Wireless Ad Hoc Networks*. September 2004. Advisor: Dr. Rusty Baldwin.
9. Clutz, Maj Tom (Ph.D., Operations Research, AFIT), *A Framework for Prognostics Reasoning*. March 2003. Advisor: Dr. Kenneth Bauer, Jr.
10. Woodward, Capt William (M.S., Operations Research, AFIT), *Measuring the Risk of Shortfalls in Air Force Capabilities*. March 2004. Advisor: Dr. Richard Deckro.
11. ¹Flietstra, Capt Timothy (M.S., Operations Research, AFIT), *An Integrated Architecture and Feature Selection Algorithm for Radial Basis Neural Networks*. March 2002. Advisor: Dr. Kenneth Bauer, Jr.

SERVICE AND PROFESSIONAL ACTIVITIES

Service to the University of Pittsburgh

IE Faculty Search Committee, 2011-2012
 IE Distance Learning Committee, 2011-2012
 IE Faculty Search Committee, 2009-2010
 IE Space Planning Committee, 2009-2010
 IE Faculty Search Committee, 2008-2009

Service to Northeastern University

Faculty co-Advisor, Northeastern University Student Chapter of IIE, 2007-2008
 Industrial Engineering Cooperative Education Committee, 2007-2008

Service to Air Force Institute of Technology

Departmental Service

Head's Search Committee (Dept of Operational Sciences), 2006-2007
 Head's Search Committee (Dept of Operational Sciences), 2005-2006
 Faculty Search Committee (Dept of Operational Sciences), 2003-2004
 Departmental Webmaster (Dept of Operational Sciences), 2002-2007
 Departmental Catalogue Representative (Dept of Operational Sciences), 2002-2007

¹ *Most Exceptional M.S. Thesis in Operational Sciences*, Graduate School of Engineering and Management.

Graduate School of Engineering & Management Service

Dean's Ad Hoc Promotion and Tenure Process Review Committee, 2006
Dean's Representative (Ph.D. dissertation in Electrical Engineering), 2006
Dean's Representative (Ph.D. dissertation in Physics), 2005
Academic Review Board, Graduate School of Engineering & Management, 2003-2007
Faculty Council Secretary, Graduate School of Engineering & Management, 2002-2003

Service to the Discipline

Editorial Appointments

Department Editor, *IIE Transactions on Operations Engineering and Analysis*, 2009-present
Area Editor, *Operations Research Letters*, 2011-present
Area Editor (Stochastic Models), *Wiley Encyclopedia of Operations Research & Management Science*
Associate Editor, *Operations Research*, 2012-present
Associate Editor, *Naval Research Logistics*, 2009-present
Associate Editor, *Operations Research Letters*, 2006-present
Associate Editor, *IEEE Transactions on Reliability*, 2003-2008

Ad Hoc Reviewing Service

- Reviewer, *Operations Research*
- Reviewer, *Operations Research Letters*
- Reviewer, *Naval Research Logistics*
- Reviewer, *IIE Transactions*
- Reviewer, *Probability in the Engineering & Informational Sciences*
- Reviewer, *Queueing Systems: Theory & Applications (QUESTA)*
- Reviewer, *Stochastic Models*
- Reviewer, *INFORMS Journal on Computing*
- Reviewer, *European Journal of Operational Research*
- Reviewer, *Applied Stochastic Models in Business & Industry*
- Reviewer, *IEEE Transactions on Reliability*
- Reviewer, *IEEE/ACM Transactions on Networks*
- Reviewer, *Quality and Reliability Engineering International*
- Reviewer, *Computers and Mathematics With Applications*
- Reviewer, *Journal of the Franklin Institute*
- Reviewer, *Journal of the Australian Mathematical Society*
- Reviewer, *Military Operations Research*
- Reviewer, *Mathematical and Computer Modelling*
- Reviewer, *Computers and Industrial Engineering*
- Reviewer, *Industrial Engineering Research Conference*
- Reviewer, National Science Foundation proposals (2007, 2010, 2011)
- Reviewer, U.S. Defense Threat Reduction Agency proposals (2010)
- Judge, INFORMS Quality, Statistics, and Reliability Student Paper Contest (2009)

Tracks and/or Sessions Organized and Chaired

"Performance Evaluation of Wireless Sensor and Ad-Hoc Networks." *INFORMS Annual Meeting*, November 13-16, 2011, Charlotte, NC.

"Stochastic Maintenance and Reliability Models." *Industrial Engineering Research Conference*, May 21-25, 2011, Reno, NV.

“Prognostics and Predictive Maintenance.” *INFORMS Annual Meeting*, November 7-10, 2010, Austin, TX (co-Chair with Nagi Gebraeel).

“Stochastic Maintenance Optimization Models.” *Industrial Engineering Research Conference*, June 5-9, 2010, Cancun, Mexico.

Track co-Chair, Operations Research Track, *Industrial Engineering Research Conference*, May 30-June 3, 2009, Miami, FL.

“Unreliable Queueing Systems with Retrials.” Operations Research Track, *Industrial Engineering Research Conference*, May 30-June 3, 2009, Miami, FL.

“Stochastic Models.” Operations Research Track, *Industrial Engineering Research Conference*, May 17-21, 2008, Vancouver, BC, Canada.

“Stochastic Programming.” Operations Research Track, *Industrial Engineering Research Conference*, May 17-21, 2008, Vancouver, BC, Canada.

“Theory and Applications of Stochastic Processes.” Operations Research Track, *Industrial Engineering Research Conference*, May 19-23, 2007, Nashville, TN.

“Stochastic Modeling in Systems Prognosis.” Applied Probability Cluster of the *INFORMS Annual Meeting*, October 19-22, 2003, Atlanta, GA.

“Stochastic Modeling in Military Applications I.” Applied Probability Cluster of the *INFORMS Annual Meeting*, November 17-20, 2002, San Jose, CA.

“Stochastic Modeling in Military Applications II, Panel: Threats, Security, and Stochastic OR.” Applied Probability Cluster of the *INFORMS Annual Meeting*, November 17-20, 2002, San Jose, CA.

Positions of Leadership and Service

- President, IIE Operations Research Division, 2011-present
- President-Elect, IIE Operations Research Division, 2010-2011
- Chair, *IIE Transactions on Operations Engineering and Analysis* Best Paper Award Committee, 2010
- Organizing Committee, Industrial Engineering Research Conference, 2009
- Board of Directors, IIE Operations Research Division, 2007-2009
- Executive Committee, Cincinnati/Dayton Chapter of INFORMS, 2006-2007
- Past President, Cincinnati/Dayton Chapter of INFORMS, 2005-2006
- Immediate Past President, Cincinnati/Dayton Chapter of INFORMS, 2004-2005
- President, Cincinnati/Dayton Chapter of INFORMS, 2003-2004
- Vice President/President-Elect, Cincinnati/Dayton Chapter of INFORMS, 2002-2003
- Secretary, Cincinnati/Dayton Chapter of INFORMS, 2001-2002

Professional Development Activities

- *INFORMS Young Researcher Roundtable*, INFORMS Conference on OR Practice, 2005. Nominated and selected to attend this forum for promising young researchers in OR/MS to interact with practitioners in the field.
- *U.S. Air Force Instructor's School*, Maxwell Air Force Base, Montgomery, AL, 2002. An intensive, three-week course on teaching methods and strategies.
- *NSF Engineering Education Scholars Program*, University of New Hampshire, 2000. A four-day workshop designed to help prepare engineering Ph.D. candidates for a career in academia. The workshop emphasized NSF proposal preparation and strategies for effective university-level teaching.