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Education

- Ph.D. Industrial Engineering and Operations Research, Penn State University, 2001
Concentration: Stochastic operations research
- M.S. Industrial and Systems Engineering, Ohio University, 1997
Concentration: Stochastic operations research
- B.S. Industrial and Systems Engineering, *summa cum laude*, Ohio University, 1995
Minor: Mathematics

Professional Experience

- 2021 – **Professor and Co-Director of the Clemson OR Institute (CORI)**
Department of Industrial Engineering, Clemson University
- 2019 – 2021 **Professor and Department Chair**
Department of Industrial Engineering, Clemson University
- 2016 – 2019 **Professor and Co-Director of the SMAC Laboratory**
Department of Industrial Engineering, University of Pittsburgh
- 2008 – 2016 **Associate Professor and Co-Director of the SMAC Laboratory**
Department of Industrial Engineering, University of Pittsburgh
- 2007 – 2008 **Associate Professor of Industrial Engineering**
Department of Mechanical & Industrial Engineering, Northeastern University
- 2005 – 2007 **Associate Professor of Operations Research** (with tenure 2006)
Department of Operational Sciences, Air Force Institute of Technology
- 2001 – 2005 **Assistant Professor of Operations Research**
Department of Operational Sciences, Air Force Institute of Technology
- 1991 – 1994 **Engineering Co-op**
Diamond Power Specialty Company, Lancaster, Ohio
(Now Diamond Power International, Inc.)

Editorial Appointments

Guest Editor	<i>Optimization Letters</i>	2024 – present
Editorial Board	<i>Probability in the Engineering & Informational Sciences</i>	2017 – present
Senior Editor	<i>Maynard's Industrial & Systems Engineering Handbook</i>	2019 – 2023
Associate Editor	<i>Operations Research</i>	2012 – 2022
Area Editor	<i>Operations Research Letters</i>	2011 – 2021
Area Editor	<i>Wiley Encyclopedia of Operations Research & Mgt Science</i>	2007 – 2013
Department Editor	<i>IIE Transactions</i>	2009 – 2012
Associate Editor	<i>Naval Research Logistics</i>	2009 – 2012
Associate Editor	<i>Operations Research Letters</i>	2006 – 2011
Associate Editor	<i>IEEE Transactions on Reliability</i>	2003 – 2008

Professional Affiliations

Fellow	Institute of Industrial and Systems Engineers (IISE)
Senior Member	Institute for Operations Research & the Management Sciences (INFORMS)
Member	INFORMS Applied Probability Society (APS)
Member	Military Operations Research Society (MORS)
Member	Tau Beta Pi, National Engineering Honor Society
Member	Omega Rho, International Operations Research Honor Society

Publications

Refereed Journal Papers

1. Soltani, M., Khademi, A. and J.P. Kharoufeh. Near-optimal replacement policies for offshore wind farms. Submitted to *Service Science* (under second review).
2. Soltani, M., Khademi, A. and J.P. Kharoufeh (2026). Optimal replacement of fixed-base and floating offshore wind turbines. Forthcoming in *Optimization Letters*.
3. Soltani, M., Kharoufeh, J.P. and A. Khademi (2024). Structured replacement policies for offshore wind turbines. *Probability in the Engineering and Informational Sciences*, 38 (2), 355–386.
4. Bhattacharya, A., Kharoufeh, J.P. and B. Zeng (2023). A nonconvex regularization scheme for the stochastic dual dynamic programming algorithm. *INFORMS Journal on Computing*, 35 (5), 1161–1178.
5. Cordeiro, J.D., Kharoufeh, J.P. and M.O. Oxley (2019). On the ergodicity of a class of level-dependent quasi-birth-and-death processes. *Advances in Applied Probability*, 51 (4), 1109–1128.
6. Abdul-Malak, D.T., Kharoufeh, J.P. and L.M. Maillart (2019). Maintaining systems with heterogeneous spare parts. *Naval Research Logistics*, 66 (6), 485–501.
7. Dehghanian, A. and J.P. Kharoufeh (2019). Optimal stopping with a capacity constraint: Generalizing Shepp's urn scheme. *Operations Research Letters*, 47 (4), 311–316.
8. Bhattacharya, A., Kharoufeh, J.P. and B. Zeng (2018). Structured storage policies for energy distribution networks. *IIE Transactions*, 50 (8), 683–698.

9. Abdul-Malak, D.T. and J.P. Kharoufeh (2018). Optimally replacing multiple systems in a shared environment. *Probability in the Engineering and Informational Sciences*, 32 (1), 179–206.
10. Bhattacharya, A., Kharoufeh, J.P. and B. Zeng (2018). Managing energy storage in microgrids: A multistage stochastic programming approach. *IEEE Transactions on Smart Grid*, 9 (1), 483–496.
11. van Oosterom, C., Maillart, L.M. and J.P. Kharoufeh (2017). Optimal maintenance policies for a safety-critical system and its deteriorating sensor. *Naval Research Logistics*, 64 (5), 399–417.
12. Bhattacharya, A. and J.P. Kharoufeh (2017). Linear programming formulation for nonstationary, finite-horizon MDP models. *Operations Research Letters*, 45 (6), 570–574.
13. Dehghanian, A., Kharoufeh, J.P. and M. Modarres (2016). Strategic dynamic jockeying between two parallel queues. *Probability in the Engineering and Informational Sciences*, 30 (1), 41–60.
14. Flory, J.A., Kharoufeh, J.P. and D.T. Abdul-Malak (2015). Optimal replacement of continuously degrading systems in partially observed environments. *Naval Research Logistics*, 62 (5), 395–415.
15. Degirmenci, G., Kharoufeh, J.P. and O.A. Prokopyev (2015). On optimal clustering in mobile wireless sensor networks under uncertainty. *Military Operations Research*, 20 (2), 19–33.
16. Sullivan, K.M., Abdul-Malak, D.T., Kharoufeh, J.P. and R.O. Baldwin (2015). Optimally locating application virtualization resources on a network. *Military Operations Research*, 20 (1), 5–20.
17. Bian, L., Gebraeel, N. and J.P. Kharoufeh (2015). Degradation modeling for real-time estimation of residual lifetimes in dynamic environments. *IIE Transactions*, 47 (5), 471–486. (***IIE Transactions Best Paper Award, Quality and Reliability Engineering, 2016.***)
18. Özkan, E. and J.P. Kharoufeh (2015). Incompleteness of results for the slow-server problem with an unreliable fast server. *Annals of Operations Research*, 226 (1), 741–745.
19. Özkan, E. and J.P. Kharoufeh (2014). Optimal control of a two-server queueing system with failures. *Probability in the Engineering and Informational Sciences*, 28 (4), 489–527.
20. Degirmenci, G., Kharoufeh, J.P. and O.A. Prokopyev (2014). Maximizing the lifetime of query-based wireless sensor networks. *ACM Transactions on Sensor Networks*, 10 (4), Article 56. (DOI: 10.1145/2523814).
21. Flory, J.A., Kharoufeh, J.P. and N. Gebraeel (2014). A switching diffusion model for lifetime estimation in randomly-varying environments. *IIE Transactions*, 46 (11), 1227–1241.
22. Kharoufeh, J.P., Cox, S.M. and M.E. Oxley (2013). Reliability of manufacturing equipment in complex environments. *Annals of Operations Research*, 209 (1), 231–254.
23. Degirmenci, G., Kharoufeh, J.P. and R.O. Baldwin (2013). On the performance evaluation of query-based wireless sensor networks. *Performance Evaluation*, 70 (2), 124–147.
24. Ulukuş, M.Y., Kharoufeh, J.P. and L.M. Maillart (2012). Optimal replacement policies under environment-driven degradation. *Probability in the Engineering and Informational Sciences*, 26 (3), 405–424.

25. Cordeiro, J.D. and J.P. Kharoufeh (2012). The unreliable $M/M/1$ retrial queue in a random environment. *Stochastic Models*, 28 (1), 29–48.
26. 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. *IIE Transactions*, 44 (7), 534–550.
27. Sherman, 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.
28. Kharoufeh, J.P., Solo, C.J. and M.Y. Ulukuş (2010). Semi-Markov models for degradation-based reliability. *IIE Transactions*, 42 (8), 599–612.
29. 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.
30. 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.
31. Flory, J.A. and J.P. Kharoufeh (2010). Optimal satellite payload selection and specification. *Military Operations Research*, 15 (3), 43–57.
32. Kharoufeh, J.P. and D. Mixon (2009). On a Markov-modulated shock and wear process. *Naval Research Logistics*, 56 (6), 563–576.
33. 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.
34. Mann, C.R., Baldwin, R.O., 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.
35. Mann, C.R., Baldwin, R.O., Kharoufeh, J.P. and B.E. Mullins (2008). Energy-efficient search for finite-lifetime resources in sensor networks with time-constrained queries. *ACM SIGMOBILE: Mobile Computing and Communications Review*, 12 (2), 31–39.
36. 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.
37. 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.
38. Sherman, N.P. and J.P. Kharoufeh (2006). An $M/M/1$ retrial queue with unreliable server. *Operations Research Letters*, 34 (6), 697–705.
39. Kharoufeh, J.P., Finkelstein, D. and D. Mixon (2006). Availability of periodically inspected systems with Markovian wear and shocks. *Journal of Applied Probability*, 43 (2), 303–317.
40. 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.

41. 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.
42. Kharoufeh, J.P. and S.M. Cox (2005). Stochastic models for degradation-based reliability. *IEEE Transactions*, 37 (6), 533–542.
43. 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.
44. Kharoufeh, J.P. and N. Gautam (2004). A fluid queueing model for link travel time moments. *Naval Research Logistics*, 51 (2), 242–257.
45. Kharoufeh, J.P. and N. Gautam (2004). Deriving link travel-time distributions via stochastic speed processes. *Transportation Science*, 38 (1), 97–106.
46. Sherman, N.P. and J.P. Kharoufeh (2004). Analytical modeling of joint reception, staging, onward movement, and integration. *Mathematical and Computer Modelling*, 39 (6-8), 799–815.
47. 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.
48. Kharoufeh, J.P. (2003). Explicit results for wear processes in a Markovian environment. *Operations Research Letters*, 31 (3), 237–244.
49. Peterson, B., Baldwin, R.O., 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.
50. Flietstra, T., Bauer, K. and J.P. Kharoufeh (2003). Integrated feature and architecture selection for radial basis neural networks. *International Journal of Smart Engineering System Design*, 5, 507–516.
51. 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.
52. Kharoufeh, J.P. and M.J. Chandra (2002). Statistical tolerance analysis for non-normal or correlated normal component characteristics. *International Journal of Production Research*, 40 (2), 337–352.

Refereed Journal Papers (In Progress)

1. Flory, J.A. and J.P. Kharoufeh, J.P. Optimal replacement in partially observed environments with noisy degradation signals. (In preparation.)
2. Bhattacharya, A. and J.P. Kharoufeh. Dynamic optimal control of stored energy in microgrids. (In preparation.)
3. Cordeiro, J.D. and J.P. Kharoufeh. Dynamic arrival and service rate control of a retrial queue in a random environment. (In preparation.)
4. Kharoufeh, J.P. On the transient distribution of Markov reward processes. (In preparation.)

Books or Edited Books

1. Bidanda, B. (Editor) *Maynard's Industrial & Systems Engineering Handbook*, Sixth Edition. McGraw-Hill, New York, NY, 2023 (Section Editor: Statistics and Probability).
2. Cochran, J.J., Cox, L.A., Keskinocak, P., Kharoufeh, J.P. and Smith, J.C. (Eds.) *Wiley Encyclopedia of Operations Research and Management Science*. John Wiley & Sons, New York, NY. Published January 1, 2011.

Refereed Book Chapters

1. Flory, J.A. and J.P. Kharoufeh. Stochastic models for industrial and systems engineering. In *Maynard's Industrial & Systems Engineering Handbook*, Sixth Edition, B. Bidanda (Editor), pp. 615–636, 2023, McGraw-Hill Publishers, New York, NY.
2. Bountourelis, T., Ulukuş, M.Y., Kharoufeh, J.P. and S.G. Nabors. The modeling, analysis, and management of intensive care units. In *Handbook of Healthcare Operations Management: Methods and Applications*, B.T. Denton (Editor), pp. 153–182, 2013, Springer, New York, NY.
3. Kharoufeh, J.P. The $M/G/s/s$ queue. In *Wiley Encyclopedia of Operations Research and Management Science*, J. Cochran, T. Cox, P. Keskinocak, J.P. Kharoufeh, J.C. Smith (Eds.), 2011. John Wiley & Sons, New York, NY.
4. Kharoufeh, J.P. Level-dependent quasi-birth-and-death processes. In *Wiley Encyclopedia of Operations Research and Management Science*, J. Cochran, T. Cox, P. Keskinocak, J.P. Kharoufeh, J.C. Smith (Eds.), 2011. John Wiley & Sons, New York, NY.
5. Cordeiro, J.D. and J.P. Kharoufeh. Batch Markovian arrival processes (BMAP). In *Wiley Encyclopedia of Operations Research and Management Science*, J. Cochran, T. Cox, P. Keskinocak, J.P. Kharoufeh, J.C. Smith (Eds.), 2011. John Wiley & Sons, New York, NY.

Refereed Conference Proceedings and Abstracts

1. Soltani, M., Kharoufeh, J.P. and A. Khademi (2023). Optimal call center staffing and pricing under QoS constraints. In *Proceedings of the 2023 Industrial and Systems Engineering Research Conference (Vol. 1)*, New Orleans, LA, May 20–23, 2023, pp. 189-194.
2. Anhalt, A.N., Kharoufeh, J.P. and A. Bhattacharya (2017). Improving access to healthcare by minimizing appointment delays. In *Proceedings of the 2017 Industrial and Systems Engineering Research Conference*, Pittsburgh, PA, May 20–23, 2017, pp. 579–584.
3. Anhalt, A.N. and J.P. Kharoufeh (2015). Comparative study of lung cancer screening policies and cost impacts. In *Proceedings of the 2015 Industrial and Systems Engineering Research Conference*, Nashville, TN, May 30–June 2, 2015, pp. 1563–1571. (**Best Paper Award**, Operations Research Track.)
4. Bhattacharya, A. and J.P. Kharoufeh (2014). Optimal microgrid energy storage strategies in the presence of renewables. In *Proceedings of the 2014 Industrial and Systems Engineering Research Conference*, Montreal, Canada, May 31–June 4, 2014, pp. 1348–1355.
5. 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, CD-ROM.

6. Nabors, S.G., Bountourelis, T., Schaefer, A., Clermont, G., Luangkesorn, L., Kharoufeh, J., Maillart, L. and W. Yang (2011). Systematic engineering of acute care delivery: Predictability of intensive care unit patient throughput using process modeling. In *Proceedings of the American Thoracic Society International Conference*, Denver, CO, May 13–18, 2011. (Refereed Abstract.)
7. Nabors, S.G., Bountourelis, T., Schaefer, A., Luangkesorn, L., Kharoufeh, J.P., Maillart, L.M., Yang, W. and G. Clermont (2011). Cost impact of blocking: Predictability of ICU patient throughput and cost variance using process modeling. In *Proceedings of the 31st International Symposium on Intensive Care and Emergency Medicine*, Brussels, Belgium, March 22–25, 2011. (Refereed Abstract.)
8. Flory, J.A., Kharoufeh, J.P. and L.M. Maillart (2010). Optimal procurement and deployment of irreparable, multi-component systems. In *Proceedings of the 2010 Industrial Engineering Research Conference*, Cancun, Mexico, June 5–9, 2010, CD-ROM.
9. Ulukuş, 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.
10. 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.
11. Cordeiro, 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. (**Best Paper Award**, Operations Research Track.)
12. 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.
13. 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.
14. 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.)
15. 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*, Nov 10–13, pp. 123–128.
16. 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, CD-ROM.
17. Bush, Brian O., Kharoufeh, J.P., and Luis 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, pp. 125–136.

Other 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 the 2011 NSF Engineering Research and Innovation Conference*, Atlanta, GA, January 4–7, 2011.
2. Kharoufeh, J.P. (2008). Unreliable retrieval queueing systems in time-varying environments. *Air Force Office of Scientific Research, Optimization and Discrete Mathematics Program Review*, Arlington, VA, April 21–23, 2008.
3. Kharoufeh, J.P. (2007). Analysis and optimal control of unreliable retrieval queueing systems. *Air Force Office of Scientific Research, Optimization and Discrete Mathematics Program Review*, Arlington, VA, May 7–9, 2007.

Presentations

Invited University Seminars

1. Kharoufeh, J.P. (2021). A primer on personal finance. IISE Student Chapter Seminar Series, **Clemson University**, March 24, 2021.
2. Kharoufeh, J.P. (2019). Staffing and pricing in co-sourced call centers. Department of Industrial and Systems Engineering, **University of Minnesota**, September 25, 2019.
3. Kharoufeh, J.P. (2019). Building success in publishing. Swanson School of Engineering Seminar, **University of Pittsburgh**, April 4, 2019.
4. Kharoufeh, J.P. (2018). Building success in publishing. Swanson School of Engineering Seminar, **University of Pittsburgh**, March 1, 2018.
5. Kharoufeh, J.P. (2017). Staffing and pricing call centers under uncertainty with co-sourced agents. Operations Research Colloquium, **Pennsylvania State University**, September 26, 2017.
6. Kharoufeh, J.P. (2015). Call center co-sourcing: A joint pricing and staffing framework. Department of Industrial Engineering, **Clemson University**, March 6, 2015.
7. Kharoufeh, J.P. (2014). Optimal replacement of wind energy systems. **Keynote Address**, EU-RANDOM's Young European Queueing Theorists Workshop, **Eindhoven University**, The Netherlands, November 3–5, 2014.
8. Kharoufeh, J.P. (2013). Optimal replacement policies for wind energy systems. Department of Industrial Engineering, **University of Arkansas**, June 27, 2013.
9. Kharoufeh, J.P. (2013). Analysis and lifetime maximization of query-based wireless sensor networks. Department of Industrial and Systems Engineering, **Auburn University**, April 24, 2013.
10. Kharoufeh, J.P. (2012). Performance analysis and optimization of query-based wireless sensor networks. Department of Mathematical Sciences, **United States Air Force Academy**, April 11, 2012.
11. Kharoufeh, J.P. (2011). Asymptotic approximations for a cumulative degradation process. Department of Mathematics and Statistics, **Air Force Institute of Technology**, April 7, 2011.

12. Kharoufeh, J.P. (2011). A mathematical framework for reliability assessment in randomly-varying environments. Department of Industrial and Systems Engineering, **Georgia Institute of Technology**, March 11, 2011.
13. Kharoufeh, J.P. (2010). Some results for unreliable queueing systems with retrials. Department of Industrial and Systems Engineering, **Rutgers University**, March 30, 2010.
14. Kharoufeh, J.P. (2009). Unreliable retrial queues in a random environment. Operations Research Colloquium, **Pennsylvania State University**, March 24, 2009.
15. Kharoufeh, J.P. (2008). Unreliable retrial queues with time-varying parameters. Department of Operations Management, Statistics and Management Science, **University of Alabama**, December 5, 2008.
16. Kharoufeh, J.P. (2008). Unreliable retrial queues with time-varying parameters. Department of Industrial Engineering, **University of Pittsburgh**, January 18, 2008.
17. Kharoufeh, J.P. (2007). A stochastic service system with disruptions and retrials. Department of Decision Sciences, **Drexel University**, January 26, 2007.
18. Kharoufeh, J.P. (2007). A mathematical framework for condition-based reliability. Department of Mechanical and Industrial Engineering, **Northeastern University**, January 12, 2007.
19. Kharoufeh, J.P. (2006). Maximizing the availability of a periodically inspected system with hidden failures. Cincinnati-Dayton Chapter of INFORMS Business Meeting, **Wright State University**, November 16, 2006. (*Outstanding Young Chapter Member Lecture.*)
20. Kharoufeh, J.P. (2006). Maximizing the availability of a periodically inspected system with hidden failures. Department of Mechanical and Industrial Engineering, **University of Iowa**, October 19, 2006.
21. Kharoufeh, J.P. (2006). Some limit theorems for a cumulative degradation process. Department of Mathematics and Statistics, **Wright State University**, May 5, 2006.
22. Kharoufeh, J.P. (2006). Optimal periodic inspection of a system subject to wear and shock degradation. Department of Systems and Information Engineering, **University of Virginia**, Charlottesville, VA, February 10, 2006.
23. Kharoufeh, J.P. (2005). Availability of periodically inspected systems subject to Markovian wear and shocks. Distinguished Lecture Series, Industrial Engineering Colloquium, **Pennsylvania State University**, April 7, 2005.
24. Kharoufeh, J.P. (2000). Stochastic analysis of link travel time distributions. Department of Operational Sciences, **Air Force Institute of Technology**, Dayton, OH, August 2000.
25. Kharoufeh, J.P. (2000). An analysis of vehicle travel times via a modified queueing network approach. Department of Engineering Management, **Old Dominion University**, April 2000.
26. Kharoufeh, J.P. (2000). An analysis of vehicle travel times via a modified queueing network approach. Department of Industrial and Systems Engineering, **Virginia Polytechnic Institute and State University**, March 2000.

27. Kharoufeh, J.P. (2000). Performance analysis of freeway systems using a modified queueing network approach. Systems and Industrial Engineering Department, **University of Arizona**, February 14, 2000.
28. Kharoufeh, J.P. and K.G. Goulias (1998). Longitudinal and cross-sectional kernel density-based nonparametric identification of daily activity and travel patterns. **University of Toronto**, August 1998.

Invited Conference Presentations

1. Sabhasachi, S. and J.P. Kharoufeh (2026). Residual life estimation via learned environments. Industrial and Systems Engineering Research Conference, Arlington, TX, May 16-19, 2026 (scheduled).
2. Soltani, M., Kharoufeh, J.P. and A. Khademi (2025). Optimal replacement of fixed-base and floating offshore wind turbines. INFORMS Annual Meeting, Atlanta, GA, October 26-29, 2025.
3. Fralix, B., Kharoufeh, J.P. and D. Pittman (2025). Multivariate generalized Pólya processes and applications. INFORMS Annual Meeting, Atlanta, GA, October 26-29, 2025.
4. Soltani, M., Kharoufeh, J.P. and A. Khademi (2025). Replacement policies for fixed and floating wind farms. Industrial and Systems Engineering Research Conference, Atlanta, GA, May 31-June 3, 2025.
5. Fralix, B., Kharoufeh, J.P. and D. Pittman (2024). Stochastic systems fed by self-exciting point processes. INFORMS Annual Meeting, Seattle, WA, October 20-23, 2024.
6. Soltani, M., Khademi, A. and J.P. Kharoufeh (2024). Approximate maintenance policies for large-scale offshore wind farms. INFORMS Annual Meeting, Seattle, WA, October 20-23, 2024.
7. Soltani, M., Khademi, A. and J.P. Kharoufeh (2023). Computing optimal replacement policies for offshore wind farms via approximate dynamic programming. INFORMS Annual Meeting, Phoenix, AZ, October 15-18, 2023.
8. Soltani, M., Kharoufeh, J.P. and A. Khademi (2023). Optimal call center staffing and pricing under QoS constraints. Industrial and Systems Engineering Research Conference, New Orleans, LA, May 20-23, 2023.
9. Soltani, M., Kharoufeh, J.P. and A. Khademi (2022). Structured replacement policies for offshore wind turbines. INFORMS Annual Meeting, Indianapolis, IN, October 16-19, 2022.
10. Soltani, M., Kharoufeh, J.P. and A. Khademi (2021). Maintenance optimization of an offshore wind turbine subject to weather conditions. INFORMS Annual Meeting, Anaheim, CA, October 24-27, 2021.
11. Wang, Y., Kharoufeh, J.P. and D. Jiang (2021). Hierarchical value iteration for fast-slow MDPs. INFORMS Annual Meeting, Anaheim, CA, October 24-27, 2021.
12. Soltani, M., Kharoufeh, J.P. and A. Khademi (2021). Optimal co-sourcing strategies in call centers. Industrial and Systems Engineering Research Conference, Online, May 22-25, 2021.

13. Dimas, G.L, Trapp, A.T. and J.P. Kharoufeh (2020). Modeling the United States defensive asylum process: A queueing approach. INFORMS Annual Meeting, Online, November 7-13, 2020.
14. Cordeiro, J.D. and J.P. Kharoufeh (2019). Drift conditions for the ergodicity of a class of level-dependent $M/G/1$ -type processes. INFORMS Applied Probability Society Conference, Brisbane, Australia, July 3-5, 2019.
15. Abdul-Malak, D.T. and J.P. Kharoufeh (2018). Maintaining systems with heterogeneous spare parts. INFORMS Annual Meeting, Phoenix, AZ, November 4-8, 2018.
16. Cordeiro, J.D., Kharoufeh, J.P. and M.E. Oxley (2018). Ergodicity of a level-dependent quasi-birth and death (LDQBD) process via the generalized inverse. 9th International Workshop on Applied Probability (IWAP 2018), Budapest, Hungary, June 17-22, 2018.
17. Abdul-Malak, D.T. and J.P. Kharoufeh (2018). Maintaining systems with heterogeneous spare parts. Industrial and Systems Engineering Research Conference, Orlando, FL, May 19-22, 2018.
18. Abdul-Malak, D.T. and J.P. Kharoufeh (2017). Optimally replacing multiple systems in a shared environment. INFORMS Annual Meeting, Houston, TX, October 22-25, 2017.
19. Anhalt, A.N., Bhattacharya, A. and J.P. Kharoufeh (2017). Strategies for improving specialty care appointment scheduling. INFORMS Annual Meeting, Houston, TX, October 22-25, 2017.
20. Bhattacharya, A., Kharoufeh, J.P. and B. Zeng (2017). Managing stored energy in microgrids via multistage stochastic programming. INFORMS Annual Meeting, Houston, TX, October 22-25, 2017.
21. Bhattacharya, A. and J.P. Kharoufeh (2017). Managing stored energy in microgrids via multistage stochastic programming. INFORMS Applied Probability Society Conference, Northwestern University, Evanston, IL, July 10-12, 2017.
22. Abdul-Malak, D.T. and J.P. Kharoufeh (2017). Staffing and contract pricing of co-sourced call centers. Industrial and Systems Engineering Research Conference, Pittsburgh, PA, May 20-23, 2017.
23. Anhalt, A.N., Kharoufeh, J.P. and A. Bhattacharya (2017). Improving access to healthcare by minimizing appointment delays. Industrial and Systems Engineering Research Conference, Pittsburgh, PA, May 20-23, 2017.
24. Bhattacharya, A. and J.P. Kharoufeh (2017). Structured storage policies for energy distribution networks. Industrial and Systems Engineering Research Conference, Pittsburgh, PA, May 20-23, 2017.
25. Abdul-Malak, D.T. and J.P. Kharoufeh (2016). Wind farm replacement in a Markov modulated environment. INFORMS Annual Meeting, Nashville, TN, November 13-16, 2016.
26. Anhalt, A.N. and J.P. Kharoufeh (2016). Improving access to healthcare by minimizing appointment delays. INFORMS Annual Meeting, Nashville, TN, November 13-16, 2016.

27. Bhattacharya, A., Kharoufeh, J.P. and B. Zeng (2016). Managing stored energy in microgrids via multistage stochastic programming. INFORMS Annual Meeting, Nashville, TN, November 13-16, 2016.
28. Anhalt, A.N., Bhattacharya, A. and J.P. Kharoufeh (2016). A robust optimization framework for optimal energy management in microgrids. Industrial and Systems Engineering Research Conference, Anaheim, CA, May 21-24, 2016.
29. Mirzaeian, N., Mousavi, M. and J.P. Kharoufeh (2016). Market prices for call centers with co-sourcing. POMS Annual Conference, Orlando, FL, May 6-9, 2016.
30. Bhattacharya, A. and J.P. Kharoufeh (2016). Energy storage management in microgrids: A consumer's perspective. POMS Annual Conference, Orlando, FL, May 6-9, 2016.
31. Abdul-Malak, D.T. and J.P. Kharoufeh (2015). Multi-component replacement in a Markov modulated environment. INFORMS Annual Meeting, Philadelphia, PA, November 1-4, 2015.
32. Bhattacharya, A. and J.P. Kharoufeh (2015). Energy storage management in microgrids: A supplier's perspective. INFORMS Annual Meeting, Philadelphia, PA, November 1-4, 2015.
33. Bhattacharya, A. and J.P. Kharoufeh (2015). Optimal energy storage management in grid-connected microgrids. Industrial and Systems Engineering Research Conference, Nashville, TN, May 30-June 2, 2015.
34. Anhalt, A.N. and J.P. Kharoufeh (2015). Comparative study of lung cancer screening policies and cost impacts. Industrial and Systems Engineering Research Conference, Nashville, TN, May 30-June 2, 2015.
35. Xia, Y., Kurt, M. and J.P. Kharoufeh (2015). Optimal management of a finite supply of spares under random reconditioning durations. Industrial and Systems Engineering Research Conference, Nashville, TN, May 30-June 2, 2015.
36. Kharoufeh, J.P. (2014). Optimal replacement in partially observed environments. INFORMS Annual Meeting, San Francisco, CA, November 9-12, 2014.
37. Abdul-Malak, D.T. and J.P. Kharoufeh (2014). Optimal allocation and pricing of servers under uncertainty with co-sourcing. INFORMS Annual Meeting, San Francisco, CA, November 9-12, 2014.
38. Bhattacharya, A. and J.P. Kharoufeh (2014). Optimizing energy storage in smart microgrids with renewables. INFORMS Annual Meeting, San Francisco, CA, November 9-12, 2014.
39. Kharoufeh, J.P. (2014). A switching diffusion model for lifetime estimation in randomly-varying environments. Industrial and Systems Engineering Research Conference, Montreal, Canada, May 31-June 3, 2014.
40. Abdul-Malak, D.T. and J.P. Kharoufeh (2014). Optimal scheduling of servers under uncertainty with recourse. Industrial and Systems Engineering Research Conference, Montreal, Canada, May 31 - June 3, 2014.
41. Bhattacharya, A. and J.P. Kharoufeh (2014). Optimal microgrid energy storage strategies in the presence of renewables. Industrial and Systems Engineering Research Conference, Montreal, Canada, May 31 - June 3, 2014.

42. Kharoufeh, J.P. and J.A. Flory (2013). Optimally replacing a wind turbine component in a partially-observed environment. INFORMS Annual Meeting, Minneapolis, MN, October 6-9, 2013.
43. Abdul-Malak, D.T. and J.P. Kharoufeh (2013). Optimal routing in a channel with failure-prone links. INFORMS Annual Meeting, Minneapolis, MN, October 6-9, 2013.
44. Esmaili, N., Maillart, L.M. and J.P. Kharoufeh (2013). Optimal equipment replacement for a Markov additive process with Brownian noise and jumps. INFORMS Annual Meeting, Minneapolis, MN, October 6-9, 2013.
45. van Oosterom, C., Maillart, L.M., Kharoufeh, J.P. and H. Peng (2013). Optimal maintenance policies for a safety-critical system and its deteriorating sensor. INFORMS Annual Meeting, Minneapolis, MN, October 6-9, 2013.
46. Flory, J.A. and J.P. Kharoufeh (2013). Optimal replacement of a component in a partially-observable environment. INFORMS Applied Probability Society Conference, San Jose, Costa Rica, July 15-17, 2013.
47. Parlak, A.I. and J.P. Kharoufeh (2013). Optimally locating application virtualization resources on a network. Industrial and Systems Engineering Research Conference, San Juan, Puerto Rico, May 18-22, 2013.
48. Ozkan, E. and J.P. Kharoufeh (2012). Optimal control of a two-server queueing system with failures. INFORMS Annual Meeting, Phoenix, AZ, October 14-17, 2012.
49. Flory, J.A. and J.P. Kharoufeh (2012). Optimal replacement models for a wind turbine component. INFORMS Annual Meeting, Phoenix, AZ, October 14-17, 2012.
50. Parlak, A., Kharoufeh, J.P., Baldwin, R.O. and R. Reston (2012). Optimally locating military healthcare virtualization resources. INFORMS Annual Meeting, Phoenix, AZ, October 14-17, 2012.
51. 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.
52. 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.
53. Degirmenci, G., Kharoufeh, J.P. and O.A. Prokopyev (2012). Maximizing the lifetime of query-based wireless sensor networks via dynamic parameter selection. INFORMS Telecommunications Conference, Boca Raton, FL, March 15-17, 2012.
54. 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.
55. 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.

56. 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.
57. Ulukuş, 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.
58. 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.
59. 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.
60. 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)
61. 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.
62. 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.
63. Ulukuş, 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.
64. Keskin, B., Kharoufeh, J.P. and S.H. Melouk (2010). Analysis of a production-inventory system with unreliable supplier. INFORMS Annual Meeting, Austin, TX, November 7-10, 2010.
65. 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.
66. Ulukuş, 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.
67. 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.
68. 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.
69. Khojandi, A., Kharoufeh, J.P. and L.M. Maillart (2009). Control of a retrieval queueing system with unreliable, heterogeneous servers. Industrial Engineering Research Conference, Miami, FL, May 30-June 3, 2009.

70. 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.
71. 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.
72. Kharoufeh, J.P. (2008). Some limit theorems for a cumulative degradation process. INFORMS Annual Meeting, Washington, D.C., October 12-15, 2008.
73. Kharoufeh, J.P. and T.B. Booher (2008). Optimal periodic inspection of complex degrading systems. Industrial Engineering Research Conference, Vancouver, BC, May 17-21, 2008.
74. 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.
75. 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.
76. 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.
77. 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.
78. 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.
79. 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.
80. Kharoufeh, J.P. (2006). Degradation-based prognostics via phase-type approximations. INFORMS Annual Meeting, Pittsburgh, PA, November 5-8, 2006.
81. Flory, 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.
82. 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.
83. 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.
84. 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.
85. 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.

86. Cox, S.M. and J.P. Kharoufeh (2002). Stochastic models for aircraft prognostics. INFORMS Annual Meeting, San Jose, CA, November 17-20, 2002.
87. 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.
88. Kharoufeh, J.P. (2001). Stochastic analysis of link travel times in transportation networks. INFORMS Annual Meeting, Miami Beach, FL, November 4-7, 2001.
89. 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.

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 retrieval queue. INFORMS Annual Meeting, San Diego, CA, October 11-14, 2009.
4. Sherman, N.P. and J.P. Kharoufeh (2005). An infinite-capacity retrieval 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), Waikoloa, 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.

Funded Research

Funding Summary

- Principal Investigator (PI): 18 of 22 projects
- Total funding awarded (all roles): \$5,716,724
- Total funding awarded (as PI): \$3,055,763

Peer-Reviewed Grants

1. Daniel Jiang (PI) and J.P. Kharoufeh (co-PI)
Dynamic Risk-Averse Optimization of Distributed Energy Resource Aggregators
National Science Foundation (ECCS-1807536)
August 2018 – July 2022
Amount: \$350,892
2. J.P. Kharoufeh (PI)
Antagonistic Graph Coloring Under Uncertainty
Defense Advanced Research Projects Agency (DARPA) via AFRL (FA8750-17-1-0090)
February 2017 – April 2018
Amount: \$135,592
3. J.P. Kharoufeh (PI)
Effective Management of Operating and Maintenance Activities for Wind Turbines
National Science Foundation (CMMI-1266194)
May 2013 – April 2017
Amount: \$275,000
4. O. Prokopyev (PI); co-PIs: J.P. Kharoufeh, L.M. Maillart, D. Saure, A.J. Schaefer, J.P. Vielma
CEMOR: Computing Equipment for Military Operations Research at the University of Pittsburgh
Air Force Office of Scientific Research
Defense University Research Instrumentation Program (DURIP)
June 2012 – May 2013
Amount: \$245,286
5. J.P. Kharoufeh (PI) and L.M. Maillart (co-PI); N. Gebraeel (co-PI), Georgia Tech
*Collaborative Research:
Adaptive Maintenance Planning Based on Evolving Residual Life Distributions*
National Science Foundation (CMMI-0856702)
September 2009 – August 2013
Amount: \$499,200 (Pitt: \$324,732; Georgia Tech: \$174,468)
6. J.P. Kharoufeh (PI) and R.O. Baldwin (co-PI), AFIT
*Collaborative Research:
NECO: A Mathematical Framework for the Performance Evaluation of Large-Scale Sensor Networks*
National Science Foundation (CNS-0831707)

September 2008 – August 2012

Amount: \$411,994 (Pitt: \$299,994 + \$12,000 REU; AFIT: \$100,000)

7. A.J. Schaefer (PI); J. Rajgopal (co-PI); J. Kharoufeh, L. Maillart, O. Prokopyev (co-Investigators)
Veterans Engineering Resource Center
Department of Veterans Affairs: Health for Operations and Management
July 2009 – September 2011
Amount: \$1,800,000
8. J.P. Kharoufeh (PI)
Analysis and Optimal Control of Unreliable Retrieval Queueing Systems
Air Force Office of Scientific Research (F1ATA-06-0-34J001 and FA9550-08-1-0004)
January 2006 – June 2008
Amount: \$245,312
9. J.P. Kharoufeh (PI)
Remaining Lifetime Prognosis via Stochastic Degradation Models
Air Force Office of Scientific Research (FQ8671-04-0-0359)
January 2004 – December 2004
Amount: \$120,494
10. K. Bauer, Jr. (PI); J.P. Kharoufeh (co-PI)
Mathematical Models for Aircraft Diagnostics/Prognostics
Air Force Office of Scientific Research (FQ8671-02-0-0542)
January 2002 – December 2002
Amount: \$105,608

Other Grants and Contracts

1. J.P. Kharoufeh (PI)
Dynamic Optimization of Maintenance Activities for Offshore Wind Energy Systems
Clemson University (CU SUCCEEDS Seed Grant 1604)
March 2025 – February 2026
Amount: \$10,000
2. J.P. Kharoufeh (PI)
Engineering Access to Care
Department of Veterans Affairs (VA240-14-D-0038 and VA701-16-J-0148)
VA Pittsburgh Healthcare System
October 2015 – September 2017
Amount: \$169,820
3. J.P. Kharoufeh (PI); Roe Teper (co-PI), Department of Economics
Smart Microgrids: Optimization and Equilibrium Analysis
Center for Industry Studies (University of Pittsburgh)
July 2015 – June 2016
Amount: \$50,000
4. J.P. Kharoufeh (PI)
Optimal Energy Arbitrage in Smart Microgrids with Storage
Mascaro Center for Sustainable Innovation (University of Pittsburgh)

- January 2015 – August 2015
Amount: \$25,000
5. J.P. Kharoufeh (PI)
Optimal Microgrid Energy Procurement and Storage Strategies in the Presence of Renewables
Mascaro Center for Sustainable Innovation (University of Pittsburgh)
November 2013 – October 2014
Amount: \$20,000
 6. J.P. Kharoufeh (PI)
Comparative Study of Lung Cancer Risk Models: Impacts on the VHA Screening Process
Department of Veterans Affairs (VA244-13-C-0540)
VA Pittsburgh Healthcare System
October 2013 – September 2015
Amount: \$227,221
 7. J.P. Kharoufeh (PI)
Analysis and Optimization of Telephone Systems at VA Pittsburgh Health System
Department of Veterans Affairs (VA244-12-C-0161)
VA Pittsburgh Healthcare System
February 2012 – August 2013
Amount: \$154,198
 8. J.P. Kharoufeh (PI)
Optimizing Mean Mission Duration Specification for Multiple-Payload Satellites
U.S. Department of Defense (Organization classified) (F448528)
July 2005 – September 2006
Amount: \$57,372
 9. J.P. Kharoufeh (PI)
Degradation-Based Lifetime Modeling
U.S. Department of Defense (Organization classified) (E448444)
July 2004 – September 2005
Amount: \$65,497
 10. J.P. Kharoufeh (PI)
Optimal Sampling of a Chemical Hazard Area
Air Force Research Laboratory (NGWSHE00472511)
Chemical-Biological Defense Programs
July 2004 – September 2005
Amount: \$59,377
 11. J.P. Kharoufeh (PI)
Stochastic Model for Joint Reception, Staging, Onward Movement, and Integration
United States Transportation Command
April 2002 – March 2003
Amount: \$18,283
 12. J.P. Kharoufeh (PI)
Modeling and Analysis of Link and Path Travel Times in Stochastic and Dynamic Transportation Networks

AFIT Cooperative Research and Development Agreement Salary Funds
 October 2001 – October 2002
 Amount: \$20,000

Contributions to Teaching

Courses Taught or Assisted

Course No.	Course Title	Institution	Level	Term(s)
IE 2680	Personal Finance Practicum (Seminar)	Clemson	Ugrad	Sp 25–26
IE 3140	Seminar in Industrial Engineering	Clemson	Ugrad	Fa 20, Sp 21
IE 3600	Industrial Apps of Probability & Stats I	Clemson	Ugrad	Sp 20, 24–26, Fa 21–24
IE 8090	Modeling Systems Under Risk	Clemson	Grad	Fa 20, Sp 21
IE 8780	Foundations of Probability for IE	Clemson	Grad	Fa 21–25
IE 8880	Advanced Probabilistic Methods	Clemson	Grad	Sp 22–23, 26
IE 2072	Probability (measure-theoretic)	Pitt	Grad	Fa 08–11, 13–18
IE 2084	Stochastic Processes	Pitt	Grad	Sp 09–18
IE 3083	Operations Research in Energy	Pitt	Grad	Sp 14
IE 3085	Queueing Theory	Pitt	Grad	Sp 09; Fa 10,12,14,16
IE 3998	Ph.D. Independent Study	Pitt	Grad	Sp 10,12
IE 1070	Prob, Random Vars and Distributions	Pitt	Ugrad	Fa 15–18
ENGR 0020	Probability and Stats for Engineers I	Pitt	Ugrad	Fa 11–13, Su 18
MIM U515	Operations Research	NEU	Ugrad	Fa 07
IEM G230	Probabilistic Operations Research	NEU	Grad	Sp 08
OPER 540	Stochastic Modeling & Analysis I	AFIT	Grad	Wi 02–07
OPER 601	Operations Research Seminar	AFIT	Grad	Sp 04–07
OPER 641	Stochastic Modeling & Analysis II	AFIT	Grad	Su 01,02; Sp 03–07
OPER 647	Queueing System Analysis	AFIT	Grad	Fa 01, 03–06; Su 02
OPER 741	Advanced Stochastic Modeling	AFIT	Grad	Fa 05
OPER 747	Queueing Networks	AFIT	Grad	Fa 02
OPER 699	Special Topics in Queueing Theory	AFIT	Grad	Wi 02
OPER 699	Special Topics in Stochastic Modeling	AFIT	Grad	Sp 05
OPER 899	Special Topics in MDPs	AFIT	Grad	Sp 04; Su 04
OPER 899	Special Topics in Math. Reliability	AFIT	Grad	Fa 05
IE 424	Process Quality Engineering	PSU	Ugrad	Fa 00, assisted
IE 425	Operations Research	PSU	Ugrad	Sp 99, assisted
ISE 304	Applied Engineering Statistics	Ohio	Ugrad	Wi 97, Sp 97
ISE 305	Engineering Statistics I (Probability)	Ohio	Ugrad	Sp 96, assisted
ISE 306	Engineering Statistics II	Ohio	Ugrad	Sp 96, assisted

Average teaching evaluations (past eight years) = 4.60/5.00

Pitt = University of Pittsburgh

NEU = Northeastern University

AFIT = Air Force Institute of Technology

PSU = Pennsylvania State University

Ohio = Ohio University

Contributions to Non-classroom Teaching

- Undergrad Seminar: *A Primer on Personal Finance* (for B.S. students Sp 24, Clemson)
- Undergrad Seminar: *Personal Finance* (for B.S. students Sp 23, Clemson)
- Undergrad Seminar: *Personal Finance* (for B.S. students Sp 22, Clemson)
- Undergrad Seminar: *A Primer on Personal Finance* (for B.S. students Sp 21, Clemson)
- Graduate Seminar: *Building Success in Publishing* (for Ph.D. students Sp 18-19, Pittsburgh)
- Undergrad Seminar: *Personal Finance* (for B.S. students Sp 14-18, Pittsburgh)
- Graduate Seminar: *Introduction to Latex* (for M.S. and Ph.D. students Sp 06, AFIT)
- Graduate Seminar: *Introduction to Ph.D. Research* (for Ph.D. students Sp 04-07, AFIT)
- OPER 699 Special Studies: Topics in Queueing Theory (Wi 02, AFIT)
- OPER 699 Special Studies: Topics in Stochastic Modeling (Sp 05, AFIT)
- OPER 899 Special Studies: Topics in Markov Decision Processes (Sp 04; Su 04, AFIT)
- OPER 899 Special Studies: Topics in Mathematical Reliability (Fa 05, AFIT)

Student Advising**Ph.D. Students** (Current)

1. **Munn, Chloe** (2025 – present)
Clemson University
Dissertation: *TBD*
Expected May 2029
2. **Saha, Sabhasachi** (2024 – present)
Clemson University
Dissertation: *TBD*
Expected May 2028

Ph.D. Students (Completed)

1. **Soltani, Morteza**
Clemson University, August 2025
Dissertation: *Replacement Optimization for Offshore Wind Turbine Farms*
Sponsor: Departmental Graduate Research and Teaching Assistantships
First Position: Senior Decision Scientist, Operations Research, Delta Airlines
2. **Abdul-Malak, David T.**
University of Pittsburgh, December 2018
Dissertation: *Maintenance and Service System Optimization: Three Essays*
Sponsor: NSF grant CMMI-1266194
First Position: Senior Quantitative Analyst, PNC Bank
Current Position: Data Scientist, Meta (formerly Facebook)

3. **Bhattacharya, Arnab**
 University of Pittsburgh, December 2017
 Dissertation: *Optimal Energy Storage Strategies in Microgrids*
 Sponsor: Pitt Mascaro Center for Sustainable Innovation and Center for Industry Studies
 First Position: Energy System Optimization & Control Engineer, Pacific Northwest NL
 Current Position: Senior Optimization Engineer, Fermata Energy
4. **Flory, John A.**
 University of Pittsburgh, August 2013
 Dissertation: *Optimal Replacement Strategies for Wind Energy Systems*
 Sponsor: NSF grant CMMI-0856702 and Post-9/11 GI-Bill
 Current Position: OR Analyst, Advanced Decision Analytics, Sandia National Laboratories
5. **Degirmenci, Guvenc**
 University of Pittsburgh, April 2013
 Dissertation: *Performance Analysis and Optimization of Query-Based Wireless Sensor Networks*
 Sponsor: NSF grant CNS-0831707
 First Position: Operations Research and Planning Engineer, FedEx Ground
 Current Position: Senior Manager, Applied Science, Amazon Web Services (AWS)
6. **Cordeiro, James D.**
 Air Force Institute of Technology, September 2007
 Dissertation: *Unreliable Retrieval Queues in a Random Environment*
 Sponsor: Air Force Office of Scientific Research
 Recent Position: Assistant Professor, Department of Mathematics, University of Dayton
7. **Sherman, Nathan P.**
 Air Force Institute of Technology, June 2006
 Dissertation: *Analysis and Control of Unreliable, Single-Server Retrieval Queues with Infinite-Capacity Orbit and Normal Queue*
 Sponsor: Air Force Office of Scientific Research
 Current Position: Division Chief, United States Air Force
8. **Cox, Steven M.**
 Air Force Institute of Technology, September 2004
 Dissertation: *Hybrid Stochastic Models for Remaining Lifetime Prognosis*
 Sponsor: Air Force Office of Scientific Research
 Current Position: United States Air Force

M.S. Students Completed (Without Thesis)

1. Anhalt, Ashley (IE, Pittsburgh). August 2015. Project: *Comparative Study of Lung Cancer Screening and Cost Impacts*. Sponsor: U.S. Department of Veterans Affairs.
2. Parlak, Ayse (IE, Pittsburgh). December 2014. Project: *Optimally Locating Virtual Resources for the Military Health System*. Sponsor: Air Force Research Laboratory via Oak Ridge Association of Universities.
3. Özkan, Erhun (IE, Pittsburgh). August 2013. Project: *Optimal Control of a Two-Server Queueing System with Failures*. Sponsor: U.S. Department of Veterans Affairs. (Erhun is now an Assistant Professor at Koç University, Turkey.)

4. Khojandi, Anahita (IE, Pittsburgh). December 2009. (Anahita is now a Full Professor in the Department of ISE at the University of Tennessee.)

M.S. Students Completed (With Thesis)

1. Crawford, Brian (Operations Research, AFIT). *Approximate Analysis of an Unreliable M/M/2 Retrial Queue*. March 2007. Sponsor: Air Force Office of Scientific Research.
2. Kallemyn, Benjamin (Operations Research, AFIT). *Prioritizing Satellite Payload Selection via Optimization*. March 2007. Sponsor: U.S. Department of Defense. (Co-advisor: David P. Morton.)
3. Booher, Timothy (Operations Research, AFIT). *Optimal Periodic Inspection of a Stochastically Degrading System*. March 2006. Sponsor: Air Force Office of Scientific Research.
4. Flory, John A. (Operations Research, AFIT). *Optimizing Mean Mission Duration for Multiple-Payload Satellites*. March 2006. Sponsor: U.S. Department of Defense.
5. Cook, Timothy (Operations Research, AFIT). *Optimal Maintenance for Stochastically Degrading Satellite Constellations*. March 2005. Sponsor: U.S. Department of Defense.
6. Gulyas, Cole (Operations Research, AFIT). *Stochastic Capability Models for Satellite Constellations*. March 2005. Sponsor: U.S. Department of Defense.
7. Offutt, Edwin (Operations Research, AFIT). *Selection and Application of Distorted Risk Measures*. March 2005.
8. Plourde, Jennifer (Operations Research, AFIT). *Optimal Sampling of a Chemical Hazard Area*. March 2005. Sponsor: Air Force Research Laboratory: Chemical-Biological Defense Programs. (Jennifer has since completed medical school at the University of New Mexico.)
9. Chapin, Patrick (Operations Research, AFIT). *Age Replacement and Service Rate Control of Stochastically Degrading Queues*. March 2004. (Patrick earned a Ph.D. in Statistics at Iowa State University and was Assistant Professor of Statistics, Air Force Institute of Technology.)
10. Finkelstein, Daniel (Applied Mathematics, AFIT). *Analytical Results for Single-Unit Systems Subject to Markovian Wear and Shocks*.¹ March 2004. Sponsor: Air Force Office of Scientific Research. (Dan later earned a Ph.D. in Systems Engineering at the University of Virginia.)
11. Solo, Christopher (Operations Research, AFIT). *Phase-Type Approximations for Wear Processes in a Semi-Markov Environment*. March 2004. Sponsor: Air Force Office of Scientific Research. (Chris later earned a Ph.D. at Penn State, was Assistant Professor in the Department of Mathematical Sciences at the U.S. Air Force Academy, and is now adjunct at Penn State.)
12. Cho, Jae Il. (Systems Engineering, AFIT). *Shortest Path Problems in a Stochastic and Dynamic Environment*. March 2003. Sponsor: Royal Korean Army.
13. Hendrixson, Jennifer (Operations Research, AFIT). *Analysis of Scheduling Policies for a M/G/1 Queue with Rework*. March 2003.

¹Most Exceptional M.S. Thesis in Applied Mathematics, 2004, Grad School of Engineering and Management, AFIT.

14. Sherman, Nathan P. (Operations Research, AFIT). *A Stochastic Model for Joint Reception, Staging, Onward Movement, and Integration (JRSOI)*.² March 2003. Sponsor: United States Transportation Command. (Nate continued his studies at AFIT and earned a Ph.D. in OR.)
15. Sipe, Jeffrey (Applied Mathematics, AFIT). *Transient Analysis and Applications of Markov Reward Processes*. March 2003. (Jeff went on to earn an M.S. in Statistics at Duke University.)
16. Sumter, Brad (Operations Research, AFIT). *Optimal Replacement Policies for Satellite Constellations*. March 2003. Sponsor: Air Force Space Command, Space Analysis Center.
17. Yager, Nicholas (Operations Research, AFIT). *Models for Sortie Generation with Autonomic Logistics Capabilities*. March 2003. Sponsor: Air Force Office of Scientific Research.

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

1. Abtahi, Mahbod (Ph.D., IE/OR, Clemson). *Dissertation in progress*. Advisors: Drs. Hamed Rahimian and Amin Khademi.
2. Walters, Michael (Ph.D., Electrical Engineering, Clemson). *Dissertation in progress*. Expected August 2029. Advisor: Dr. Kumar Venayagamoorthy.
3. Boik, Philip (Ph.D., Mathematical Sciences, Clemson). *Dissertation in progress*. Expected August 2028. Advisor: Dr. Brian Fralix.
4. Pittman, David J. (Ph.D., Mathematical Sciences, Clemson). *Dissertation in progress*. Expected August 2028. Advisor: Dr. Brian Fralix.
5. Wang, Yijia (Ph.D., IE/OR, Pittsburgh). *Structured Strategies for Learning and Exploration in Sequential Decision Making*. August 2022. Advisor: Dr. Daniel Jiang.
6. Shadi Sanoubar, Shadi (Ph.D., IE/OR, Pittsburgh). *Temporal and Spatial Considerations in Maintenance Planning*. August 2022. Advisors: Drs. Lisa Maillart and Oleg Prokopyev.
7. Gulcan, Berkay, (Ph.D., IE/OR, Clemson). *Stochastic Optimization for Renewable Energy System Design and Operations*. August 2021. Advisor: Dr. Yongjia Song.
8. Javier, Kayla (Ph.D., Mathematical Sciences, Clemson). *A Study of Quasi-Birth-Death Processes and Markovian Bitcoin Models*. August 2020. Advisor: Dr. Brian Fralix.
9. Streiner, Scott (Ph.D., IE, Pittsburgh). *A Systematic Inquiry on Global Engineering Education: Strategies and Impact*. August 2017. Advisors: Drs. Mary Besterfield-Sacre and Larry Shuman.
10. He, Kai (Ph.D., IE/OR, Pittsburgh). *Optimal Maintenance Planning in Novel Settings*. December 2016. Advisors: Drs. Lisa Maillart and Oleg Prokopyev.
11. Dehghanian, Amin (Ph.D., IE/OR, Pittsburgh). *Optimal Incentive Alignments in Paired Kidney Exchange*. August 2015. Advisor: Dr. Andrew Schaefer.
12. Korytowski, Matthew J. (Ph.D., Electrical Engineering, Pittsburgh). *Effects of the Phase Locked Loop on the Stability of a Voltage Source Converter in a Weak Grid Environment*. December 2014. Advisor: Dr. Greg Reed.

²Most Exceptional M.S. Thesis in Operational Sciences, 2003, Grad School of Engineering and Management, AFIT.

13. Khademi, Amin (Ph.D., IE/OR, Pittsburgh). *Managing HIV Treatment in Resource-Limited and Dynamic Environments*. August 2013. Advisor: Dr. Andrew Schaefer.
14. Icten, Zeynep Gozde (Ph.D., IE/OR, Pittsburgh). *Markov Decision Process Models for Improving Equity in Liver Allocation*. December 2011. Advisor: Dr. Lisa Maillart.
15. Claypool, Erin (Ph.D., IE, Pittsburgh). *Assessing and Mitigating Risk in a Design for Supply Chain Problem*. May 2011. Advisors: Drs. Bryan Norman and Kim Needy.
16. Shenoy, Rashmi (M.S., IE, 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.
17. Mann, Christopher (Ph.D., Electrical Engineering, AFIT). *Energy-Efficient Querying of Wireless Sensor Networks*. September 2007. Advisor: Dr. Rusty Baldwin.
18. Flint, 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.
19. Decker, 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.
20. Peterson, Brian (Ph.D., Electrical Engineering, AFIT). *Device Discovery in Frequency Hopping Wireless Ad Hoc Networks*. September 2004. Advisor: Dr. Rusty Baldwin.
21. Clutz, Tom (Ph.D., Operations Research, AFIT). *A Framework for Prognostics Reasoning*. March 2003. Advisor: Dr. Kenneth Bauer, Jr.
22. Woodward, William (M.S., Operations Research, AFIT). *Measuring the Risk of Shortfalls in Air Force Capabilities*. March 2004. Advisor: Dr. Richard Deckro.
23. Flietstra, Timothy (M.S., Operations Research, AFIT). *An Integrated Architecture and Feature Selection Algorithm for Radial Basis Neural Networks*.³ March 2002. Advisor: Dr. Ken Bauer, Jr.

Hosted Scholars

1. van Oosterom, Chiel D. (Ph.D., Industrial Engineering, Eindhoven University, The Netherlands). Spring 2013. Chiel was funded by his university to study for one semester under the guidance of myself and Dr. Lisa Maillart.

Undergraduate Researchers

1. Nickles, S. Alex (B.S., Industrial Engineering, Clemson). Fall 2025. Alex developed AI models for a renewable energy proposal and was funded by a Clemson SUCCEEDS grant.
2. Polk, Kristen E. (B.S., Biology, Westminster College). Summer 2016. Kristen helped initiate collaboration with Prof. Young Jae Chun and was funded by discretionary research funds.
3. O'Donnell, Patrick O. (B.S., Industrial Engineering, University of Pittsburgh). Summer 2012. Funded by the Air Force Research Laboratory via Oak Ridge Association of Universities.

³Most Exceptional M.S. Thesis in Operational Sciences, 2002, Grad School of Engineering and Management, AFIT.

4. McNamara, Sean (B.S., Information Engineering/OR, Cornell University). Summer 2012. Funded by the Air Force Research Laboratory via Oak Ridge Association of Universities.
5. Warmbrand, Elissa (B.S., Industrial Engineering, University of Pittsburgh). Spring 2012. Elissa was funded by REU supplemental funds on NSF grant CNS-0831707.
6. Bistline, Christopher (B.S., Industrial Engineering, University of Pittsburgh). Spring 2012. Chris was funded by REU supplemental funds on NSF grant CNS-0831707.
7. Lynch, Julia M. (B.S., Industrial Engineering, University of Pittsburgh). Summer 2010. Julia was funded by a Summer Research Internship awarded by Swanson School of Engineering.
8. Migliozi, John J. (B.S., Industrial Engineering, University of Pittsburgh). Summer 2010. John was funded by REU supplemental funds on NSF grant CNS-0831707.
9. Schell, Gregg (B.S., Industrial Engineering, University of Pittsburgh). Summer 2010. Gregg was funded by REU supplemental funds on NSF grant CNS-0831707.

Honors and Awards

- ⁴*Professor of the Year*, Department of Industrial Engineering, Clemson University, 2026
- *Award of Distinction*, National Scholars Program, Clemson University, 2026
- ⁵*Professor of the Year*, Department of Industrial Engineering, Clemson University, 2025
- *Fellow Award*, Institute of Industrial and Systems Engineers (IISE), 2018
- *IIE Transactions Best Paper Award*, Quality and Reliability Engineering, 2016
- *Best Paper Award*, Operations Research Track, ISE Research Conference, 2015
- *Keynote Speaker*, EURANDOM Young European Queueing Theorists Workshop, 2014
- Finalist, *Outstanding Educator Award*, Swanson School of Engineering, 2013, 2014, 2015
- Air Force Research Laboratory Faculty Intern (via ORAU), Summers 2012, 2013, 2015–2018
- *Best Paper Award*, Operations Research Track, IE Research Conference, 2007
- *Outstanding Young Chapter Member Award*, Cincinnati/Dayton Chapter of INFORMS, 2006
- *PECASE Award Nominee*, Air Force Office of Scientific Research, 2006
- *Barchi Prize Nominee*, Military Operations Research Society, 2005
- *Outstanding Alumnus Distinguished Lecturer*, Department of Industrial and Manufacturing Engineering, Penn State University, April 7, 2005
- INFORMS Young Researcher Roundtable, INFORMS Conference on OR Practice, 2005
- ⁶*Operations Research Instructor of the Quarter*, Air Force Institute of Technology, Winter 2005

⁴Top teaching award among 22+ faculty members in the Department of Industrial Engineering, Clemson.

⁵Top teaching award among 22+ faculty members in the Department of Industrial Engineering, Clemson.

⁶Top teaching award among 22 faculty members in the Department of Operational Sciences, AFIT.

- ⁷*Dr. Leslie M. Norton Teaching Excellence Award*, Air Force Institute of Technology, 2003
- Omega Rho, International Operations Research Honor Society, 2002
- NSF Engineering Education Scholars Program, Penn State University, 2000
- ⁸Weiss Dissertation Scholar, Penn State University, 1999–2000
- ⁹Weiss Graduate Fellowship, Penn State University, 1997–1998
- Stocker Engineering Fellowship, Russ College of Engineering and Technology, Ohio University, 1995–1997
- ¹⁰Ohio Board of Regents Fellowship, 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
- Alpha Pi Mu, National Industrial Engineering Honor Society, 1993
- *Top Sophomore in Industrial and Systems Engineering*, Ohio University, 1992
- Dean's Scholarship, Ohio University, 1991–1993

⁷Top teaching award among 120+ faculty members in the Graduate School of Engineering and Management, AFIT.

⁸Awarded to only five Ph.D. candidates in the College of Engineering at Pennsylvania State University.

⁹Awarded to only five Ph.D. students in the College of Engineering at Pennsylvania State University.

¹⁰Awarded to only one graduate student (across all academic disciplines) at Ohio University.

Professional Service and Leadership Activities

Department, College and University Service

Appointment	Institution	Dates
Chair, IE Undergraduate Committee	Clemson	2024–present
Member, CECAS Curriculum Committee	Clemson	2024–present
Chair, IE Tenure, Promotion & Reappointment Committee	Clemson	2021–2024
Chair, Faculty Search Committee	Clemson	2023–2024
Chair, Fluor Endowed Chair Search Committee	Clemson	2022–2023
Co-Director, Clemson Operations Research Institute (CORI)	Clemson	2021–present
Special Assistant to the Dean for Strategic Hiring	Clemson	2021–2023
Faculty Advisor, Student Chapter of IISE	Clemson	2021–2023
IE Faculty Mentoring Task Force	Clemson	2021–2022
IE Faculty Search Committee	Clemson	2021–2022
IE Honors and Awards Committee	Clemson	2019–2020
IE Undergraduate Committee	Pitt	2017–2019
Provost Area’s Planning and Budgeting Committee	Pitt	2016–2018
Diversity Committee, Department of Industrial Engineering	Pitt	2016–2017
Chair, Swanson School of Engr. Planning & Budgeting Committee	Pitt	2015–2018
IE Undergraduate Committee	Pitt	2013–2015
Swanson School of Engineering Leadership Committee	Pitt	2013–2014
Swanson School of Engineering Planning & Budgeting Committee	Pitt	2012–2015
IE Space Planning Committee	Pitt	2011–2012
IE Space Planning Committee	Pitt	2009–2010
IE Faculty Search Committee	Pitt	2011,15,17
IE Faculty Search Committee	Pitt	2008, 2009
IE Graduate Committee	Pitt	2008, 2009
Faculty co-Advisor, Student Chapter of IIE	NEU	2007–2008
IE Cooperative Education Committee	NEU	2007–2008
Head’s Search Committee, Dept of Operational Sciences	AFIT	2006–2007
Head’s Search Committee, Dept of Operational Sciences	AFIT	2005–2006
Faculty Search Committee, Dept of Operational Sciences	AFIT	2003–2004
Departmental Webmaster, Dept of Operational Sciences	AFIT	2002–2007
Departmental Catalogue Rep, Dept of Operational Sciences	AFIT	2002–2007
Dean’s Ad Hoc Promotion and Tenure Process Review Committee	AFIT	2006
Dean’s Representative, Ph.D. dissertation in Electrical Engineering	AFIT	2006
Dean’s Representative, Ph.D. dissertation in Physics	AFIT	2005
Academic Review Board, Grad School of Engineering & Management	AFIT	2003–2007
Faculty Council Secretary, Grad School of Engineering & Management	AFIT	2002–2003

Pitt = University of Pittsburgh

NEU = Northeastern University

AFIT = Air Force Institute of Technology

Service to the Profession

Position	Organization/Conference	Dates
Guest Editor	Special Issue: <i>Optimization Letters</i>	2024–
Panelist:		
<i>Starting an Academic Career for New and Prospective QSR Faculty</i>	INFORMS Annual Meeting	2023
Panelist:		
<i>QSR Student Interaction Session</i>	INFORMS Annual Meeting	2022
Fundraising Chair	INFORMS Optimization Society Conference	2021–2022
Panelist:		
<i>INFORMS New Faculty Colloquia</i>	INFORMS Annual Meeting	2021
Panelist:		
<i>QSR Student Interaction Session</i>	INFORMS Annual Meeting	2020
Organizing Committee	2019 IIE Annual Conference & Expo	2018–2019
Panelist:		
<i>QSR Student Interaction Session</i>	INFORMS Annual Meeting	2017
Panelist:		
<i>Building Success in Publishing</i>	IIE New Faculty Colloquium	2017
Organizing Committee	INFORMS APS Conference	2013
Immediate Past President	IIE Operations Research Division	2012–2013
President	IIE Operations Research Division	2011–2012
President–Elect	IIE Operations Research Division	2010–2011
Chair	<i>IIE Transactions</i> Best Paper Award Committee	2010
Organizing Committee	2009 IE Research Conference	2008–2009
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
VP/President-Elect	Cincinnati/Dayton Chapter of INFORMS	2002–2003
Secretary	Cincinnati/Dayton Chapter of INFORMS	2001–2002

Conferences, Tracks and Sessions Organized

1. *Maintenance Optimization for Energy and Mobile Systems*. QSR Cluster, INFORMS Annual Meeting, October 26-29, 2025, Atlanta, GA (co-chair with A. Aziz Ezzat).
2. Track Co-Chair for Invited Sessions, *Quality Control and Reliability Engineering Track*, Industrial and Systems Engineering Research Conference, May 18-21, 2019, Orlando, FL.
3. *Energy Storage in Smart Grid Applications*. Energy Track, Industrial and Systems Engineering Research Conference, May 30-June 2, 2015, Nashville, TN.
4. *Queueing Models*. Telecomm Cluster, INFORMS Annual Meeting, October 6-9, 2013, Minneapolis, MN.
5. *Maintenance Optimization*. QSR Cluster, INFORMS Annual Meeting, October 6-9, 2013, Minneapolis, MN (co-chair with Lisa Maillart).

6. *INFORMS Applied Probability Society Conference*, July 15-17, 2013, San Jose, Costa Rica (member of Organizing Committee).
7. *Algorithmic and Policy-Level Applications of Probability*. INFORMS Applied Probability Society Conference, July 15-17, 2013, San Jose, Costa Rica (co-chair with David Goldberg).
8. *Performance Evaluation of Wireless Sensor and Ad-Hoc Networks*. Telecomm cluster, INFORMS Annual Meeting, November 13-16, 2011, Charlotte, NC.
9. *Stochastic Maintenance and Reliability Models*. Operations Research Track, Industrial Engineering Research Conference, May 21-25, 2011, Reno, NV.
10. *Prognostics and Predictive Maintenance*. *INFORMS Annual Meeting*, November 7-10, 2010, Austin, TX (co-Chair with Nagi Gebraeel).
11. *Stochastic Maintenance Optimization Models*. Industrial Engineering Research Conference, June 5-9, 2010, Cancun, Mexico.
12. Track co-Chair, *Operations Research Track*, Industrial Engineering Research Conference, May 30-June 3, 2009, Miami, FL.
13. *Unreliable Queueing Systems with Retrials*. Operations Research Track, Industrial Engineering Research Conference, May 30-June 3, 2009, Miami, FL.
14. *Stochastic Models*. Operations Research Track, Industrial Engineering Research Conference, May 17-21, 2008, Vancouver, BC, Canada.
15. *Stochastic Programming*. Operations Research Track, Industrial Engineering Research Conference, May 17-21, 2008, Vancouver, BC, Canada.
16. *Theory and Applications of Stochastic Processes*. Operations Research Track, Industrial Engineering Research Conference, May 19-23, 2007, Nashville, TN.
17. *Stochastic Modeling in Systems Prognosis*. Applied Probability Cluster of the INFORMS Annual Meeting, October 19-22, 2003, Atlanta, GA.
18. *Stochastic Modeling in Military Applications I*. Applied Probability Cluster, INFORMS Annual Meeting, November 17-20, 2002, San Jose, CA.
19. *Stochastic Modeling in Military Applications II, Panel: Threats, Security, and Stochastic OR*. Applied Probability Cluster, INFORMS Annual Meeting, November 17-20, 2002, San Jose, CA.

Ad Hoc Reviewing Service

- **Journals:** *Operations Research*, *Operations Research Letters*, *Naval Research Logistics*, *IIE Transactions*, *Probability in the Engineering & Informational Sciences*, *Queueing Systems: Theory & Applications (QUESTA)*, *INFORMS Journal on Computing*, *European Journal of Operational Research*, *Applied Stochastic Models in Business & Industry*, *IEEE Transactions on Reliability*, *Quality and Reliability Engineering International*, *Computers and Mathematics With Applications*, *Journal of the Franklin Institute*, *Journal of the Australian Mathematical Society*, *Military Operations Research*, *Mathematical and Computer Modelling*, *Computers and Industrial Engineering*

- **Proposals and Conferences:** National Science Foundation (2007, 2010, 2011, 2013, 2014, 2016, 2017, 2019, 2021), U.S. Defense Threat Reduction Agency proposals (2010), Elsevier book proposal (2015), Industrial and Systems Engineering Research Conference (annually)
- **Judging Competitions:** *INFORMS QSR Student Poster* (2017, 2020, 2022), *IIE Transactions Best Paper Award* (2017), *INFORMS Nicholson Student Paper Competition* (2016), *ISERC OR Division Best Paper Award* (2016), *IIE Student Paper Competition*, *Northeast Regional Conference* (2013), *INFORMS Quality, Statistics, and Reliability Student Paper Contest* (2009)

Consulting Activities

- Systems and Technology Research (STR), Woburn, MA, 2015-2018
- Lockheed Martin, Cherry Hill, NJ, 2015-2018
- Air Force Research Laboratory, Wright Patterson AFB, OH, 2012, 2013, 2015-2019

Professional References

Available upon request